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NO. 12

THE AMERICAN JOURNAL OF

CLINICAL MEDICINE

Vol. 29, No. 12 DECEMBER, 1922

IF everything looks dark and you've been falling
So hard and often that you scarce can rise,
Have *Faith* and *Courage:* through the gloom appalling
The sun must break and gild the leaden skies.

Adversity and failure should but serve to steel you
To meet the blows that he who strives *must* bear!
The intensest fires of Fate should but anneal you
And make you fit the Conqueror's crown to wear.

G. H. C.

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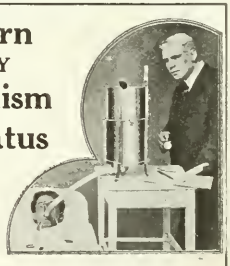

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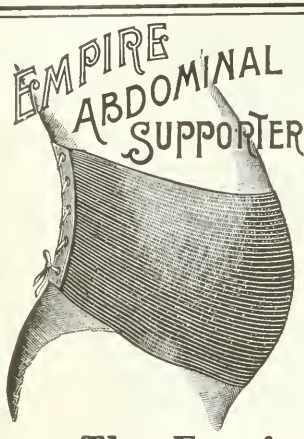

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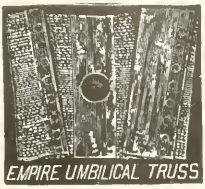

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This is a combination of the five bromides in a palatable form; it is well borne by the most irritable stomach and is less apt to produce gastric derangement and bromism than the same quantity of any single bromide when given in larger doses over a long period.

Pentabromides is of value wherever there is irritation of the nerves, as in hysteria, epilepsy, insomnia, or headache of nervous origin, uterine derangements, dysmenorrhoea, menorrhagia, acute laryngitis, etc.; in fact, in all the conditions in which the bromides are indicated, its advantages over the ordinary bromides being that it is better borne by the system, is less apt to produce bromism and is much more palatable.

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410 Canal Street **New York, N. Y.**

Brigadier General Walter D. McCaw
Assistant Surgeon General, United States Army

The American Journal of
CLINICAL MEDICINE
Dependable Therapeutic Fact for Daily Use

Vol. 29, No. 12 DECEMBER, 1922

Brigadier General Walter D. McCaw

BRIGADIER General Walter D. McCaw was born in Virginia, February 10, 1863. He graduated in medicine from the Medical College of Virginia, when only nineteen years old. At twenty-one, he took another medical degree from Columbia College of New York City and, a few months later, passed the examination as assistant surgeon in the Army, corresponding to the present grade of first lieutenant, medical corps. Five years later, he was promoted to the grade of Captain. During the Spanish-American war, he served as brigade surgeon with the grade of major of volunteers, from the middle of June to the end of November, 1898. In August of the following year, he resumed the same grade (temporary) and saw service as senior surgeon of the 42nd U. S. Infantry, retaining the grade until promoted to the rank of Major in the regular army, February 2, 1901. Less than eight years later, he was promoted to the grade of Colonel. During the World War, he was promoted to the grade of Brigadier General in the regular army.

General McCaw has had a varied career and has seen a good deal of service. He was for some time instrumental in developing the Library of the Surgeon General until it was brought to a size which places it in the category of the world's greatest medical libraries. In 1916 and 1917, General McCaw was chief surgeon of the Southern department with headquarters at San Antonio, and there directed all the medical activities during our operations in the Mexican Border.

When General Ireland gave up the post of Chief Surgeon of the American Expeditionary Forces in France and England, General McCaw succeeded him as Chief Surgeon and thus had the responsible task of medical activities during the last stage of the World War and during the trying period of demobilization after the Armistice.

Returned to the United States, General McCaw was appointed commandant of the Army Medical School in the Capital. While this institution is a postgraduate school for such physicians as have successfully qualified for service in the regular army, it is really more than that, since it has assumed a great importance as an institution of learning. It is affiliated with the famous Walter Reed General Hospital (army) and also conducts one of the most productive bacteriologic and research laboratories in the United States.

We do not desire to duplicate Dr. Blech's remarks in his "Memoirs of the World War," from which General McCaw's photograph has

been borrowed, but we cannot refrain from pointing out that General McCaw is well-known in and out of the Army as a scholar of unusual attainments. While his life's work has been given to the military forces of our country, his service to American medicine is of a sufficient importance to merit general recognition by the medical profession of the world.

Buy Christmas-Seal Stamps!

LOUIS PASTEUR (1822-1895)

During this month, the centenary of the birth of Louis Pasteur is being commemorated by the chemical societies and, no less, by the medical profession. While Pasteur was, first, a chemist and became known through certain epochal chemical discoveries, his influence soon reached much farther and came to extend to medical theory and medical practice in a degree that has hardly been equalized by the work of any other individual investigator.

If it is realized that it was Pasteur who solved the problem of the genesis of numerous diseases which we know now as bacterial in origin, and that he gave the impetus to the solution of many like puzzles, some small idea may be gained of the debt that the medical profession and mankind owe to his memory. The recognition of the occurrence of disease owing to the invasion of the organism by minute living entities, which localize in the body, multiply there and draw upon the body cells for their sustenance, thus injuring the tissues and the health, revolutionized the study of disease and, likewise, soon produced a mode of treatment that has proved far more successful in practice than any other method that had ever been proposed.

Pasteur himself inaugurated the etiologic treatment of anthrax and of rabies. The latter accomplishment alone would have been sufficient to place him high among those who have served their fellow men. His investigations and discoveries benefitted alike chemistry, medicine, many industries, and science in the abstract. He may truly be called a representative scientist in as much as his work carried him into diverse fields of research.

Pasteur was so many-sided in his work and so catholic in his interests that he found his time fully taken up with his multifarious in-

Underwood and Underwood
Louis Pasteur (1822-1895)

vestigations. Fortunately, he succeeded in associating with himself several men who were far more than assistants, who were his associates and his collaborators. Among these, his successor as the director of the Pasteur Institute probably was best fitted to commemorate the memory of the Master. It is to Duclaux, himself a scientist of note, that we owe a treatise on Pasteur which bears the significant title: "Pasteur. The History of a Mind". While this was published as long ago as 1895, it has become accessible to English-speaking physicians through a splendid translation published, in 1920, by W. B. Saunders Company.

One of Pasteur's favorite expressions which, it is said, he voiced even on his death-bed is the admonition: "We must work". To his sisters, he once wrote: "Three things, will, work, and success, comprise the whole human existence.

Underwood and Underwood

The Pasteur Institute, Paris, which was inaugurated on November 14, 1888, and where many important discoveries have been made and elaborated by Pasteur and his associates and successors

The will opens the door to brilliant and happy careers, work liberates and, once arrived at the end of the journey, success crowns the work."

In view of the experiences of the last eight years, especially those of the War, the closing remarks of an address given by Pasteur at the inauguration of the Pasteur Institute, November 14, 1888, are particularly appropriate in their almost prophetic significance. We have copied them from the "Encyclopedia Britannica":

"Two opposing laws seem to me now in contest. The one, a law of blood and death, opening out each day new modes of destruction, forces nations to be always ready for the battle. The other, a law of peace, work and health, whose only aim is to deliver man from the calamities which beset him. The one seeks violent conquests, the other the relief of mankind. The one places a single life above all victories, the other sacrifices hundreds of thousands of lives to the ambition of a single individual. The law of which we are the instruments strives even through the carnage to cure the wounds due to the law of war. Treatment by our antiseptic methods may preserve the lives of thousands of soldiers. Which of these two laws will prevail, God only knows. But of this we may be sure, that science, in obeying the law of humanity, will always labor to enlarge the frontiers of life."—Encyclopedia Britannica, Eleventh Edition, Vol. XX.

Nature loves diversity, education aims at repressing it. Those who later break through into life, show originality and make a name for themselves, are recruited chiefly from those who have escaped the sterilizing influence of the first years.—Duclaux.

DR. KARL VON RUCK (1849-1922)

On November 5, there passed away one of the most noted tuberculosis students of his time, one of the few men who linked the old period of investigations in "consumption" with the newer stage ushered in and made possible by the bacteriological discoveries of the early eighties.

Dr. Karl von Ruck was a noted tuberculosis student and physician of world-wide renown. He started his professional life as a general practitioner; although soon he devoted himself to surgery, he changed once more to take up his life's work, the study of tuberculosis.

It is interesting to remember that Doctor von Ruck's student days fell in the old clinical era before the days of bacteriology. Villemin,

of France, had just (1865) demonstrated the fact to the French Academy of Medicine that tuberculous matter is infectious. von Ruck's teacher, the great clinician Felix von Niemeyer, was exceedingly doubtful as to Villemin's work and, very naturally, his views influenced the young student von Ruck. In course of time, however, the latter became greatly interested in bacteriology which he studied especially under Robert Koch, in Berlin, after having obtained his second degree in medicine at the University of Ann Arbor, Michigan (1879); the first having been received at Tübingen in 1877.

Robert Koch's demonstration of the tubercle bacillus as the ultimate cause of tuberculosis disease (1882) became the pivot on which von Ruck's future work centered. He realized the importance of Jenner's vaccination against smallpox, of Pasteur's immunization against anthrax and, later, against rabies. On the same principles, he argued that it must be possible to produce artificially an immunity against the pathogenic action of the tubercle bacillus. When Koch announced his first tuberculin preparation (1890), von Ruck was quite ready for it and at once undertook careful researches and investigations regarding the chemical composition of the tubercle bacillus and of tuberculin and, no less, concerning the effect of tuberculin on the tuberculous and on the healthy organism.

Karl von Ruck, B.S., M.D. (1849-1922)

By that time, von Ruck had been conducting his own institution for the treatment of pulmonary diseases (The Winyah Sanatorium) for about three years. In 1897, he offered to the medical profession his "Watery Extract of Tubercle Bacilli" which is well known to many of our readers. Although this Watery Extract had many definite advantages over the old tuberculin, von Ruck was not satisfied, but continued his experimental work which finally reached fruition in the elaboration of his vaccine against tuberculosis which he announced in 1912.

For years, it had been von Ruck's dream to produce a substance by means of which children and others, who might be prodisposed, could be protected against the acquirement of tuberculous disease. It was his ambition to do with respect to tuberculosis what Jenner had accomplished for smallpox. In the course of time, he and his associates immunized numerous children with his vaccine and invariably with beneficial results in general health and, where tuberculous disease had already been established, with curative results in most cases.

Until about ten years ago, von Ruck's working capacity was truly phenomenal. He accomplished more work than any three ordinary men might do. In addition to his clinical and his experimental work, he was burdened with large financial interests that required careful watching. Financially, be it said, by the way, he was as successful as he was professionally. In consequence, he could indulge himself in his favorite study by founding the von Ruck Research Laboratory for Tuberculosis (1885).

The War (1914) interfered seriously with von Ruck's work as it did with all scientific research. Nevertheless, he carried on as well as he could. Unfortunately, in 1918, Fate dealt him a serious blow from which he never recovered. In that year, his only son, Dr. Silvio von Ruck, who had taken over the direction of the Winyah Sanatorium, died of pneumonia, after three days' illness. Within six days, his only child Silvia, a charming young lady of seventeen and the only grandchild of Dr. Karl von Ruck, succumbed to the same disease.

Doctor von Ruck was a broken man. He resumed his former duties at the Winyah Sanatorium, which was changed into a memorial institution in memory of his son and his grandchild, and continued the direction of the re-

search laboratory. Although the zest, the joy of accomplishment had gone out of his life, devotion to his old ambition urged him to go on and to continue his investigations in the chemistry of the tubercle bacillus and in the immunizing powers of fractionated solutions of tubercle bacilli, for the rest of his life.

In December, 1921, his wife succumbed to paralysis agitans of many years' standing. von Ruck himself was seriously ill with nephritis which, in course of time, determined marked cardiovascular disturbances. His health failed steadily and he paid his duty to nature on November 5. He will be succeeded, eventually, it is expected, by his nephew, Dr. Edward Schönheit, who has been trained by von Ruck sufficiently long to have imbibed his uncle's remarkable and advanced views of immunity.

von Ruck offers a good example of what constant and continued devotion to one's life work can accomplish. He was a hard student, a hard worker and a severe task master. He worked himself and his associates to the limit. He demanded the best that was in those working with him, even as he gave the best he had. Those who were satisfied with slipshod, careless methods of working did not like von Ruck. Those who knew him only casually and who, perhaps in conversation, had betrayed a rather faulty knowledge of medicine, sometimes had cause to resent his superior knowledge. On the other hand, those who knew him well, those who came to him with the honest desire to learn, were impressed with his remarkable erudition in matters medical, with his keen insight in pathological physiology and with his wonderful, almost prophetic outlook on the subject of immunization. That von Ruck was a great man, there can be no doubt. Those who knew him best, who had lived with him through times of stress, hold him to be so and they cherish his memory even as do his numerous patients in the Winyah Sanatorium, who benefitted from his remarkable clinical acumen and ability.

Underwood and Underwood
Jean-Baptiste Jupille, who was vaccinated against rabies, by Pasteur, in 1885 and who is employed as janitor in the Pasteur Institute, in Paris. The monument depicts the young fellow wrestling with a rabid dog

Medicine is a strange terrain. It is an edifice where nothing remains standing. Tradition still remains the plan of general arrangement, but it would be best that everything should come down, because there is no good to be derived from what exists except from the materials. If I were a physician, I believe I should give the mattock blow which would make all crumble.—Duclaux.

THE DOCTOR AS A BUSINESS MAN

The time has long since passed when the medical practitioner's income depended upon the good will of his patients and upon the "honorariums" that they were willing to pay him—only too often in the same spirit and in the manner in which alleged *donations* are made to preachers in some country districts. The preacher is expected to be properly and humbly grateful, since the donors do not seem to realize that, even with a successful donation party, they still owe their preacher money because, usually, they have not lived up to the financial obligations toward him that they have assumed.

Similarly, with the physician in the past. His bill often was paid as though a great favor were being done him, as though he were actually receiving a free gift.

With the revolution in business methods that has been taking place, for several years, it was unavoidable that the principle of business efficiency should be applied to the business side of the physician also. There is a business side in the doctor's work. No matter how large the professional duties, the obligations and ideals loom, in the last instance, attendance by the physician upon a case of disease, or upon a patient, implies an agreement according to which the physician is requested and promises to give his best services to the patient and that the patient will remunerate the physician in accordance with a fee schedule in force in that particular locality. While such an agreement is never drawn up in contract form, it is tacitly

accepted as existing and is considered to exist, in law.

It is not so many years ago that numerous physicians took pride in the fact that they never sent out bills and that they always put off their clients when asking for a statement for services rendered. Needless to say, the public was well pleased with such sloppy business methods and permitted these hyperphilanthropic sons of Aesculapius to live and die, if not in the poor house, at least in constant financial difficulties and without providing for an estate of any kind for their widows and orphans. Worse still, the public was pauperized by such habits and was taught to look upon the physicians' services as a due, as something to which the patients are entitled. It was then easy to consider the actual payment of a bill for services rendered as a donation.

With changing times, physicians have been obliged to change their customs. Dentists have long since established their work on proper business principles and it is understood that their bills must be paid. Surgeons also require and receive prompt payment of any indebtedness incurred, and so do specialists in all the various departments of medicine. Why then should the general practitioner lag behind? Surely, he is entitled to his "hire" as much as any other laborer. He is at his patient's beck and call, day and night, year in, year out. Is there any good reason why his emoluments should depend upon the good will of his clients and why he should everlastingly be hard up and be unable to discount his own bills?

The economic aspect of such careless financial transactions between physician and patient is deplorable and must be remedied.

It is true, there always is a good proportion of the physician's work to be charged off to charity. However, in almost every instance, it happens that charity is given indiscriminately and often without good cause. It is so much easier to write off a bad debt than to enforce payment. Moreover, in extending charity, it is doubtful whether the physician is really doing a good deed and is deserving of approval. In many cases, he is not. Shiftless people, those especially who are apt to neglect their doctors' bills, are only too prone to cry hard times and to ask for leniency almost tearfully. If the doctor can not say No, he contributes to their delinquency. He encourages them to become dead-beats; in short, he pauperizes them.

It is a principle dependent upon common sense, on justice and fairness, that the physician's bills should be presented regularly and that payment should be insisted upon. At the same time, it is essential that these bills should be made out on an equitable basis. That means, that the fees should be proportional to the value of the services rendered. Cut-rate doctors who underbid their competitors can not be reformed, says *The Medical World*. Still, they should be treated according to their deserts. It is justly claimed that no doctor should meet cut prices. If the people want that kind of physician, let them have him. Usually, he is cheaper than his price and is prone to prolong his attendance far beyond the period when he might properly cease his visits.

Talking of fees, Dr. E. H. Moore says, in *The Medical World* for June, that the regular fee for office work and for home visits is all right as a minimum fee, but, lately, he has been led to put a different construction on the subject.

"I am to get the patient on his feet as quickly as I can. If a patient recovers in a week, in cases where he would ordinarily be laid up for three weeks, he can afford to pay more for the one week's attention than he could for three.

"Another thing: the man that makes three to five dollars a day does not lose as much by being sick as the big business man that loses large amounts by his indisposition."

The charging of proper fees and the making out of regular statements require a certain amount of bookkeeping which (and here is really where the shoe pinches) is utterly distasteful to most physicians. Yet, the keeping of accounts, the making out of statements does not need to be such a terrible task if the accounts are kept according to suitable principles. We take great pleasure in referring to an article appearing in another department of this issue of CLINICAL MEDICINE and which is prepared by Mr. F. A. Hourihan. In this article, the author describes a bookkeeping system that is adapted for physicians and which can be kept by any clerk or office attendant without causing undue work or trouble to the physician. It is self evident that those physicians who have their bills made out and collected by office clerks or attendants are much less likely to be pestered for discounts or other favors and that the increased income will more than pay for the wages of a clerk. We suggest to our readers a careful study of Mr. Hourihan's article and repeat what we have said so often, that physicians must, to a proper extent, be business men, if they wish to be in a position to do the best for their patients.

BOOKKEEPING SYSTEM AND PROCEDURE FOR PHYSICIANS

On page 875 of this issue of CLINICAL MEDICINE, Mr. F. A. Hourihan, of the Department of Higher Accountancy, LaSalle Extension University, presents a system of bookkeeping that he has elaborated for the use of physicians and which, he assures us, can be maintained readily by a single office attendant. It is true that many a general practitioner will paraphrase the recipe for making rabbit pie: First, get your office attendant. However, it is realized now fairly generally that the physician's work is too complicated and too absorbing to permit him to devote the necessary time to the keeping of his accounts. Yet, these accounts must be kept in sufficient detail and with adequate accuracy so as to enable the practitioner to prepare a balance sheet at the end of the year, in order to comply with the demands of that most objectionable of Uncle Sam's myrmidons, namely, the Collector of Internal Revenue. The enforcement of the Federal income tax has made it necessary for every one, physicians included, to keep books, to take account of receipts and disbursements. For, Uncle Sam demands his percentage of one's income rigidly; and, if he does not get it, he wants to know the reason why.

Even on general principles, it is a good thing that physicians should be forced to be accurate with respect to the business phase of their profession. It is no longer possible to attend one's patients and let *Le Bon Dieu* take care of the results. If the physician's collections are not sufficient to enable him to meet his own bills, his rating at the bank and with his supply houses will be indifferent or bad. If his receipts are not greater than his disbursements, so that he can make some productive investments and create an estate for the time when he can no longer earn money or when he has to leave his wife and family, he will be charged with neglect.

The only way in which a physician can do full justice to himself and those dependent upon him is, by giving the best that is in him to his patients and in return demand payment to as full extent as they can give it. The necessity of caring for charity patients need not here be lost sight of. Still, it must be conceded that charity practice is greatly overdone and that many patients are favored and often treated free of charge who could well afford to remunerate their physician. It is beside the question, but it may be mentioned that indiscriminate charity means doing wrong to its recipients because it pauperizes them and makes them neglectful of their obligations. People receiving charity frequently are not good citizens. They often are shiftless and neglectful. They should not be encouraged

In order to conduct the "business" of medical practice efficiently, the physician obviously is in need of assistance. He must engage the services of an office attendant who, of course, must be paid. Fortunately, such an investment usually is a highly remunerative one. Patients are far less apt to neglect paying their bills when confronting the office attendant than they are to the physician himself. They are more likely to pay cash for those services, more ready (for some obscure reason) to liquidate their monthly statements, less anxious to sidestep their obligations or to get out of them.

Not only will the salary of the office attendant be readily saved out of increased receipts, but the physician will find, at the end of the year, that his total income has increased materially, that he has ready funds to discharge his own bills promptly, that he has enough money to make profitable investments and that he often is in a position to take that long-planned postgraduate course and to send the wife and the babies away for a vacation.

In a few days, a new year will commence. The books must be closed and will have to be examined for the making of the income tax returns. Now is a good time, Doctor, to open a new set of books, to engage an office attendant who is trained in bookkeeping and to have it understood that all returns, all bills, all business matters, in short, must be taken up with the office attendant. The doctor will have more time for his patients, more leisure for recreation, greater ease of mind and more freedom. There is no better investment for the medical practitioner than to inaugurate and to carry out (by proxy! be it understood) careful and efficient bookkeeping.

Do not defend yourself against faith and confidence. Life would be an immense dupery, the world in the midst of which we exist would be a colossal absurdity, if the earth were the only abiding place and if what is best in us and among us, should be lost in universal nothingness. The heavens teach not only the glory of God, they teach also hope to all those who are worthy of hope.—Duclaux.

TWILIGHT SLEEP IN LABOR

A little more than a decade ago, the socalled twilight-sleep method of alleviating the pangs of childbirth and the assuring of forgetfulness on the part of the mother of the trial through which she had passed was discussed with a good deal of animus, both for and against the pro-

cedure. True, the old objection that was raised when Sir James Y. Simpson first employed chloroform, that pain in childbirth was in accordance with the Divine Will, as laid down in the Bible, was no longer advanced. But, every other conceivable reason was urged in opposition to this particular method of aiding parturient women over their most trying experiences.

Yet, it is a fact: "If the mother knows that she is not going to face an ordeal, but is simply going into a peaceful sleep during which her child will be born, there must be a cheerful prenatal influence which can only be advantageous." Doctor Gross, whose article on amnesia and analgesia in labor we publish in another department of this issue of CLINICAL MEDICINE, makes this excellent point with decided advantage. He reasons also that "the absence of the fear of labor promises to increase the birth rate, and we all recognize that, in a certain proportion of cases, fear of childbirth has been the determining factor in the prevention of conception or the production of abortion. . . . As every parturient has a right to demand alleviation of pain that strips motherhood of its horrors, it is the indispensable duty of the physician to relieve the woman of suffering and to get her through the labor in the easiest manner".

In his notable study of this problem, Doctor Gross presents a careful comparative analysis of the various methods through which the terrors of childbirth may be alleviated and which may aid the accoucheur in delivering his patients painlessly and safely. Comparing the various methods proposed, he finds the disadvantages of narcosis induced by chloroform, ether or nitrous oxide oxygen to be greater than those attaching to the socalled twilight sleep. The combination of scopolamine and morphine, or of scopolamine and some other derivative of opium, affords, it appears, the safest and the most effective means of securing the desired result. It seems to us a distinct advantage that the twilight sleep method does not only relieve pain or, better, the consciousness of pain, but that it produces amnesia. That is to say, it brings about forgetfulness of any distress that may have been felt even though the actual pain could not come to the consciousness of the patient. Furthermore, by bringing about a blocking of the concerned nerve centers; shock and exhaustion on the part of the mother are prevented far better by this method than is possible by a general anesthesia. It appears, further, that the rate of stillbirths and of infant mortality during the first ten days is less after the employment of twilight sleep than after general anesthetics, which, it must be admitted, is a potent argument.

Altogether, it appears to us that Doctor Gross has presented a very excellent and strong case in favor of the method and his experience of years has shown it to be superior. His logical and interesting presentation can not but prove of great benefit to physicians, and we are happy to be able to publish such a remarkably well written article.

There is no end to science. So long as there shall be men, there will be savants, and so long as there shall be savants, there will be discoveries. Gradually, the spirit of men of science has been enlarged and has become open to the idea that the world is immense in number, that those of which we are ignorant considerably exceed those we know. We are sure, from certain examples, that there are circulating around us incessantly countless forces of which we are ignorant and will remain ignorant for a long time, things with which other beings than ourselves may be perfectly familiar; for it is here that we find that imperfection of our senses which does not allow us to draw conclusions from ourselves as to other beings which surround us.—Duclaux.

CHRISTMAS AT CANEY CREEK COMMUNITY CENTER

This year, there is to be celebrated the sixth Community Christmas on the Creek of Caney. Each one was bigger and better than the last. However, we volunteers who have fought through these six pioneer years want again to ask for aid; because this means food, clothing and education for a mountain child at the Caney Creek Community Center. It costs only $250 a year (could you "raise up" your child for that?) to keep a boy or girl in residence at the Center. We have a long, long waiting list. But, the seventy already here must be taken care of first. Make your opportunity check just as large as you possibly can: in the name of the blessed children Our Savior loved.

After that, we need everything that any Christmas Tree needs, and then we need that "everything" multiplied by 66; because we workers have dared to plan to place a Community Christmas Tree in each of the remote public schools that are scattered away off in the creeks and the hollows; where many, many children and fathers and mothers have never felt the sacred joy of a real Christmas.

Volunteers are ready to pack the "pretties" into saddle pockets and take them over the trails where a wagon can not go. The excited children have picked out the trees from the adjacent forests. The eager teachers are sending us the names and ages of the children, four thousand of them. Just imagine how you would feel to receive your First Christmas present, marked with your own name.

To bring this sacred joy into these drab little lives, we need pounds and pounds of candy; thousands of candy bags; Christmas bells and tinsels; dolls, drums, wagons, handkerchiefs, neckties, hair-ribbons; but you know what the folks want at Christmas.

If you don't know, send a check. We will buy at wholesale.

The waters will soon be "up." We are far from the railroad. Send your "pretties" early. Look out for the shipping point.

Sixty-six Community Christmas Trees, in the Hearts of the Hills, will reflect your spirit of service in His blessed name to thousands of neglected Children.

Yours for the happiest Christmas ever in the mountains.

ALICE G. LLOYD.

Caney Creek Community Center.
Pippapass, Ky.

—

[The shipping point mentioned by Mrs. Lloyd is Wayland, Kentucky. To that place, parcels, boxes and other bulky things should be addressed that are shipped by freight or by express. Mail pieces go to Pippapas, Kentucky.

We feel a somewhat proprietary interest in Mrs. Lloyd's charges because, last year, our girls sent down a lot of dolls and bags of candy. They are getting ready a new donation. More power to them!

As for ourselves, we "reckon" that Mrs. Lloyd can buy to better advantage than we can; therefore, a check. May it do good! We trust that many of our friends will interest themselves in this remarkable work of helping the helpless to help themselves. Not all are helpless any longer. Several have learned their lesson and have become teachers and instructors. It's a wonderful work.—ED.]

The fruitful periods of science are those in which dogmas are shaken.—Duclaux.

BEWARE OF SMUGGLED "606"

German-made "606" and "914" can not legitimately be brought into the United States for resale to dealers or physicians. Those who buy these "made-in-Germany" products may be encouraging the illegitimate practice of smuggling and thereby become liable themselves.

Until recently, both the Embargo provision of the Emergency Tariff act, and The Chemical Foundation stood in the way of the Germans again flooding American markets with foreign-made "606", "914" and other medicinal chemicals. German influence caused the defeat of the Embargo and prevented its being made a provision of the new Tariff act, notwithstanding the protests of the American Medical Association, of medical societies and American physicians in every state in the Union. And, now, German influence is seeking to destroy The Chemical Foundation because it stands in the way of German domination of the American medicinal chemical industry.

That they will not be able to do this, is the opinion of the best legal talent and the hope of the medical profession. There is no good reason why American physicians should lend themselves to illegitimate practices or to encouragement of foreign products when they are intended to supplant those made in our own country.

American-made arsphenamine and neoarsphenamine are equal if not superior to the best German arsenical products ever sold in the United States. The American neoarsphenamine is a superior product, and it has been developed to its high state of therapeutic efficiency in American laboratories after years of the most painstaking research work and thorough clinical study.

Every batch of American-made arsphenamine and neoarsphenamine is subject to examination and approval of the United States Hygienic Laboratory which conducts careful tests for toxicity. Products not coming up to the standard are rejected. This measure of protection is not afforded on products smuggled and sold in this country illegitimately.

As far as price is concerned, there is no argument. One has but to compare the pre-war German prices of "salvarsan" with the present-day price of arsphenamine. Should the fruits of American research be disregarded and foreign arsenicals again flood this country, the prices would soon jump again.

Do not be deceived or misled with specious arguments against The Chemical Foundation or in favor of German drugs. American-made and American-named medicinal chemicals, including not only arsphenamine and neoarsphenamine but procaine, cinchophen and barbital, will stand the test and justify the confidence of the medical profession.

THE ANNUAL INDEX

The Index of Volume 29 of THE AMERICAN JOURNAL OF CLINICAL MEDICINE is being prepared now. It will be printed in a small edition and all those of our subscribers who desire to receive a copy are requested to inform the Editor promptly by post card.

THE CARE OF THE BABY

It was Oliver Wendell Holmes, we believe, who said that the education of a boy should commence with his grandfather. Doctor Holmes might have gone back several generations more. He might properly have included the physical training and care, and he might have given the benefit of his splendid advice to girls as well.

Unfortunately, it is impossible, in any given case, to go back to the grandparents and we must attempt to do the best we can in the raising and educating of our children.

That this subject is of paramount importance and that people are acquiring more and more sane views on the subject, is evident by the numerous lay publications that contain articles on the subject. It is evidenced even by the immense mass of misinformation that is dealt out in some daily newspapers, also in some faddists' magazines and pseudo-scientific publications. Unfortunately, such misinformation will produce harm in many instances and we conceive it to be the clear duty of the physician to instruct his patients, his friends and the public concerning the proper care of infants—even as it is his manfest obligation to teach right living and right thinking, in short, everything tending to preserve health (physical and mental) and, where it is lost, to regain it.

The Delineator, we note with keen interest, is publishing a series of articles edited by Dr. L. Emmett Holt and dealing with the care of the baby. The first two articles of this important series covered the subjects of prenatal care and the care of the baby at birth. The article in the September issue is entitled "The General Care of the Baby". Later articles, we are informed, have to do with every step in infancy and childhood up through the formative years of early youth.

In addition, the scientific knowledge of America's foremost specialists in baby care and child welfare will be made available to *Delineator* readers in the form of pamphlets. The first of these, "Saving Life by Prenatal Care," by Dr. Ralph Lobenstine, can be procured by sending ten cents in stamps, addressed, Child Health Department, *The Delineator*, New York.

The article in the September issue, to which we have referred, says, truly, that a baby is a very delicate piece of machinery—much more complicated than any automobile. An automobile will not often be entrusted to the tender mercies of somebody who knows nothing about it. As much as possible, trained and experienced mechanics are employed. Regarding the baby, the devoted mother, feeling herself incompetent, especially with her first born, will accept all sorts of gratuitous advice given by women friends, by kind neighbors who may claim to know all about babies, seeing that "they have buried ten of their own", and especially by benevolent spinsters who, never having had children, know all about raising them.

The first injunction to a young mother, the writer of this article says truly, is: Get the best medical advice that you can, and follow it; turn a deaf ear to suggestions from all other quarters.

A young baby is very easily molded. In consequence, it is of the greatest importance to develop good habits and the time to commence molding the baby's habits is immediately after its birth. Regularity in eating, sleeping, bathing, outing; in short, regularity in everything is of paramount importance, not only for the benefit of the baby itself but also for that of the mother, the father and the entire family.

The discussion that we find in this September issue of *The Delineator* is full of good sensible advice. Physicians will do well by their patients if they will urge them to procure the issues of this interesting magazine in which this series of articles is appearing.

The great difficulty in the way of instructing our patients undoubtedly lies in the fact that we find it difficult to express our views and convictions on any medical subject in words of one syllable, as it were. We are prone to answer questions on almost any subject relating to disease and disease prevention by giving an involved dissertation in which medical (preferably Latin and Greek) terms are interspersed freely. That is supposed to give an indication of erudition. As a matter of fact, it arouses the ridicule of laymen gifted with a sense of humor. If often incites a suspicion of ignorance or at least of unclear thinking. Anybody who is thoroughly familiar with a subject can discuss it in simple terms, unless, indeed, the subject is very abstruse. Usually, however, the matter of preserving our health and that of our children is not a very abstruse and impenetrable one. It entails largely the exercise of sound common sense based upon the knowledge of certain fundamental facts. That being the case, it behooves us, if we do not know, to learn how to express simple matters simply. It is no credit to our reputation for wisdom to indulge in high-sounding and incomprehensible phrases. Our reputation for possessing knowledge will be enhanced much more if we are able to communicate information to the laity in such a

manner that they can grasp it and put it into practice.

The articles of which we have made mention are especially to be recommended for the reason that every one is simple and is not injured by involved and mystical terms or phrases. Physicians can use them to advantage as examples upon which to model their own preachments to their patients.

Logic is a proof of mediocrity, and savants who have only logic are not scientific men!—Duclaux.

WHO DISCOVERED ETHER ANESTHESIA?

Not so long ago (1920), Doctor Morton's name was inscribed among those perpetuated in the Hall of Fame and honoring the memory of persons who have deserved particularly well for their country. While Morton was not a physician, but a dentist, it was the first time that the medical profession received representation in any way in the Hall of Fame, and a great many physicians, particularly those under the influence of New England traditions, greeted the decision with loud acclaim.

It will be remembered that the honor of having first used sulphuric ether for inducing surgical anesthesia has long been a bone of contention. The claims of those who supported Morton as the actual discoverer were disputed energetically by other physicians and medical historians, especially by those of the southern states, who insisted that Dr. Crawford W. Long, of Georgia, had induced surgical anesthesia with sulphuric ether several years before Morton had done so. More recently *The Southern Medical Journal* (November 1921) published a long editorial in which this question is thrashed out once more and it is shown there that the use of ether in dentistry and surgery was suggested to Morton by Doctor Jackson, in 1846. However, Doctor Long, of Georgia, could present indisputable evidence that, in 1842, he had removed a tumor from the neck of James Venable while under the influence of ether, and that he had performed several other surgical operations on patients whom he had anethetized, before either Doctor Morton or the other two contestants (Doctor Wells and Doctor Jackson) claimed to have used an anesthetic.

This fact would seem to controvert even the evidence adduced by Dr. S. Adolphus Knopf (*Med. Rec.*, Jan. 29, 1921) in his vindication of William T. G. Morton as the discoverer and revealer of surgical anesthesia. The whole question is outlined impartially by Fielding H. Garrison in his "History of Medicine (2d ed., 1917, p. 531-2).

At its general session in November 1921, the Southern Medical Association passed a resolution declaring that Crawford W. Long and none other was the discoverer of anesthesia and that he is entitled to the credit and honor for an achievement of such inestimable benefit to medicine and humanity. A committee consisting of one member from each state represented in the Southern Medical Association was appointed to investigate the merits of all claimants to the honor of being the discoverer of anesthesia, giving the matter proper and careful attention, and report at the succeeding annual meeting.

The committee thus provided for reported to the Southern Medical Association, at its annual meeting, held at Chattanooga, Tenn., November 13 to 16, 1922. Its report is as follows:

"Whereas, unmistakable proof shows that Crawford W. Long used sulphuric ether to produce surgical anesthesia in Jefferson, Georgia, on March 30, 1842; and,

"Whereas, undoubted records show that this was the first time in history that ether was ever used for this purpose; therefore be it

"Resolved, that the Southern Medical Association, in session at Chattanooga, Tennessee, November 13 to 16, 1922, declares that Crawford W. Long and none other was the discoverer of Anesthesia, and is entitled to the credit and honor for an achievement of such inestimable benefit to medicine and to humanity".

We understand that recognition was accorded to Morton, because he had been the first to publish an account of his discovery, while reports of Long's work were not published until several years later. However, the evidence in favor of Long's priority is so clear that it is difficult to see why he should not be honored at least equally with Morton.

POLAND GIVES HIGHEST DECORATION TO MEDICAL MEN

During the year after the Armistice, Dr. Frank Lenart, of Chicago, who was then a captain in the Polish Army, submitted a recommendation to the Polish Embassy in Paris, to the effect that Col. William Lee Hart, Major Ernest Lorne Bell and Major Charles Halliday be awarded a Polish decoration. All three gentlemen were officers in the medical corps of the U. S. Army and had rendered distinguished service and care to the Polish soldiers, being willing to devote their time on all occasions for the service of the Polish cause while they were in France.

On the strength of this recommendation,

Major K. Mach, Military Attache of Poland, in Washington, D. C., addressed, last July, letters to these three American medical officers, informing them that the Ministry of Military Affairs, in Warsaw, had bestowed upon them the decoration of "Krzyz Walecznych" (Cross for Bravery).

In connection with this information, Dr. Frank Lenart pointed out to us that Poland recognizes the services rendered by the members of the medical profession and honors them by bestowing upon them the "Cross for Bravery" which is granted only to soldiers for bravery and active fighting on the battlefield.

In adjudging medical men as worthy to receive the same decoration as soldiers, the Polish government recognizes the equal bravery of the medical man, though he may be stationed far behind the firing lines. This, Doctor Lenart adds, is not a common attitude of any government. Indeed, he concludes that officials of Poland are probably the first to give full credit, and credit which is well deserved, for the high services and bravery of medical men who offered their services to fight epidemics like influenza, typhus fever, cholera; not to speak of gonorrhea, syphilis and tuberculosis, all of which were prevalent in military camps and hospitals during the war.

This is the time, Doctor Lenart believes, when the services of the medical man are beginning to be valued, recognized and honored by officials, and it will be only a short while before the public in general will take the same attitude. Still, the latter is in great need of education. It must shed much of its ignorance concerning medical matters in general.

In a later communication, Doctor Lenart gives us some interesting historical information according to which one of the oldest Polish decorations, which was given by Stanislaus August Poniatowski, King of Poland, in the year of 1792, called the cross of "Virtuti Militari," is one of the highest decorations of Poland today, and is equal to the French decoration of the "Legion of Honor". These decorations are granted only for the soldier's bravery on the battlefield and for civil services. Poland has another highest decoration, called "Polonia Restituta." With this cross, "Virtuti Militari", there was decorated lately, in Warsaw, an American lady (Doctor of Medicine) whose name he can not recall just at present. These days, General Pershing will receive from the Polish government, at the hands of the new ambassador, Dr. Wrollewski, both of the highest decorations "Virtuti Militari" and "Polonia Restituta."

Poland is the first country to equalize the "bravery" of the medical man, endangering his own life fighting epidemics, as was declared formally and officially, with that of the man at the front. Thus it is right to honor both with the same decoration, the "Krzyz Walecznych".

On another page of this issue of CLINICAL MEDICINE (pp. 933 and 935), we present some pictures showing Dr. Frank Lenart and some of his associates, constituting the personnel of the camp hospital of the Polish Army in France. All of them are American citizens.

"OUR MEDICINE MEN"

In the last few issues of *Hearst's International*, Dr. Paul De Kruif has discussed the use of drugs on the part of the medical profession in a manner that is distinctly disturbing to the placidity and the consciousness of doing the best possible, that physicians may have entertained. De Kruif is nothing if not iconoclastic. He doesn't give a little whoop if he tears down and disturbs ruthlessly all our favorite conceptions regarding the benefits to be derived from the administration of drugs under certain conditions of ill health.

Not that we agree with him in everything he says. Far from it. Nevertheless, it must be admitted that many of the things that De Kruif asserts are true. He is sufficiently close to the medical profession and evidently has studied and investigated carefully enough to speak as one of the *cognoscenti*. Furthermore, he uses for his tools a masterly command of the English language, a brilliant flow of ideas and a slashing style, all of which are very disturbing in the long run.

Quite recently, Doctor De Kruif has become guilty of a book[1] in which he does not rest content attacking the means that physicians may utilize in their work, but in which he goes at us hammer and tongs, having a glorious time giving us the old Harry. We prepared a review of this book, but it became so lengthy that we decided to publish it among the editorials. Here it is:

The author of this book is a most uncomfortable and objectionable person. He uncovers mercilessly all the foibles, the cherished inaccuracies and the deplorable inabilities of medical men who cope with the problems that confront them and he ruthlessly tears away the veil of mysticism and of secrecy and exposes cruelly the fallacy of that fetish "medical ethics," all of which a smug self-complacency

[1]See also page 940.

had fostered and perpetuated for centuries. Gifted with a remarkable command of the English language, the author even can indulge his righteous wrath in profanity that is all the more shocking (*literatim*, shocking) as it is expressed in perfectly polite words. He tears down our most cherished pretenses and uncovers whatever of sham there may be in the words and deeds of a profession that should stand above all others in its disinterestedness of motives and in purity of deeds.

The author jeers at the customs and practices of the medical profession that have come down through the centuries. He points the finger of scorn at the numerous efforts and hypotheses with which it has been attempted to explain physiological and pathological processes. He laughs at therapeutic procedures and then lays sacrilegious hands on that sacred idol of modern days, preventive medicine. In this last respect, be it said, his ratiocination is most uncomfortable. For instance, the objection is recorded to the indiscriminate expansion of the practice of preventive medicine that it has the tendency to bring about the survival and subsequent multiplication of the unfit. He appeals to the noted biometrician, Karl Pearson, who concludes from the results of his accurate mathematical analysis that the humanitarian hygienist unwisely opposes the mechanism of the survival of the fittest by which nature has kept down a too-great proliferation of undesirables. Pearson contends that continued advance in public health may swamp us with a plague of defectives.

In discussing the methods by which the ranks of medical practitioners are being replenished, the author describes graphically the conflicting methods of training average doctors and, mayhap, a few scientists, students of disease who survive the "equalitarianism" in education that prevails so generally in our medical schools. He deplores the fact that there is not made an early sharp division of those wishing to be practitioners of medicine from the ones aiming at the scientific study of disease. Since, unfortunately, the teaching of the medical curriculum is not individual but wholesale, so to speak, it is sufficient to attain an average of results manifested by the ability to answer a lot of questions after industrious cramming. Those who might wish to loiter by the wayside and devote themselves to special investigations and studies are necessarily left behind, for the reason that they neglected certain branches uninteresting to them and can not attain the desired average.

Not only the medical schools of the country but even the National Research Council and no less, the teaching and research customs in other countries are held up to ridicule and to severe criticism. In the author's opinion, there is not enough of devoted study of disease and, by way of antithesis to his destructive criticism, he offers, in the last chapter, some constructive suggestions which might, undoubtedly, lead to notable improvement of existing conditions. For, be it admitted humbly, physicians as a class are not living up to the duties that they tacitly assume with the acceptance of their degrees and of their licenses to practice their profession.

While group medicine, as practiced today, places too much emphasis on mere technical skill and on economic considerations, the elaboration and extension of the group is still considered inevitable and desirable. However, the author declares that most stress should be laid on the fact that the patient is, first of all, a human being and not an experiment animal nor an inexhaustible source of income. The group that the author describes is attractive and, under it, all the possible methods to treat diseased beings should be investigated and practiced with discrimination.

In order to make the physician realize his responsibilities, the author demands a relentless checking of his doings which could only be accomplished by necropsy of all persons dying and comparison of the findings with the final diagnosis of the "master physician" who directs the group activities. Furthermore, on the advice of a friend not a physician, but who has suffered much at the hands of doctors, it is alleged, the author suggests that chronic invalids who now are a great burden to society, being consumers only and not producers, might be made useful by furnishing material for a new type of official operating not with but against the medical profession. Such officials, called anti-physicians, would be in the employ of the state or the municipality and it would be their duty to advise, free of charge, all persons who feel themselves in the need of medical advice. The advice of the anti-physician would be, in regard to those doctors that it would be wise for the prospective patient to avoid. The possibility of graft paid by unscrupulous practitioners could be obviated by paying princely salaries to these anti-physicians and by giving them life appointments amid surroundings of ease and luxury.

Doctor De Kruif's discussions are most disturbing, irritating and annoying, for the reason that many of these things he says are so uncomfortably and damnably true. Like most

critics, he indulges in hyperbolic language and, yet, while one feels inclined to lambast him and to call upon him to produce his authority through which he sets himself up as a critic of an ancient and honored profession, one must, in the end, agree with him that there is much that needs improving, that there are many things that should be eliminated and that there are numerous matters that should be accomplished. It is hard to tell whether the author sits aloof like a vindicative goblin, jeering at a profession to which he seemingly belongs, or whether he writes out of a distressed sense of *mea culpa*. It is impossible to decide whether he, like another Peck's Bad Boy, is trying how far he may go in spoofing people whose pretentious solemnity amuses him or whether he is honestly attempting to stir the members of a profession that he loves into mending their ways.

A man's character is like his shadow which sometimes follows, and sometimes precedes him, and which is occasionally longer, occasionally shorter than he is. —From the French.

HAS THE MEDICAL PROFESSION MADE GOOD!

The assertion is made frequently by irregular practitioners, by antivivisectionists, antivaccinationists and various other pretenders that the diminished frequency of disease and the lesser danger attending that risky occupation, life, has happened without the intermediation of medical men; in short, that physicians had nothing to do with it and that they are altogether useless, a burden upon the commonwealth. With regard to this silly assertion, it is interesting to hear from one who has witnessed the progress of medicine as an active participant for the unusually long period of sixty years. During the recent convocation of the American College of Surgeons, Dr. W. W. Keen, of Philadelphia, addressed the Boston Surgical Society, telling of the progress of sixty years in medicine and surgery. According to the *Boston Evening Transcript* for October 27, Doctor Keen dealt with discoveries and developments that were well known to his hearers through the reading of books. However, the witness who gives oral testimony, if he is able to speak with accuracy and authority, often succeeds in picturing conditions past and present with a degree of reality seldom attained in the written account.

In the audience addressed by Doctor Keen, there was probably not a person who did not know that, until about forty years ago, smallpox was the only enemy that the doctor could fight with vaccination. Those in the audience knew that, within about the same period, the medical profession has learned how to prevent and combat tetanus, diphtheria, malaria, yellow fever and many other diseases. The doctors who heard the venerable Philadelphia surgeon already knew that it was in 1886 that the nature of appendicitis was made clear. So with many of the other things concerning which he spoke.

But, Doctor Keen was telling of those things as an eye-witness of their beginnings. He had been engaged for years in the practice of his profession before many of them had been brought to pass. He could from recollection tell of the days when the dreaded "membranous croup," as diphtheria was then known, took its little victims while parents watched them choking to death. He witnessed the marvelous change wrought by "the blessed antitoxin." He could recall the days when, as he expressed it, "our instruments from germ-gathering velvet-lined cases were laid out on tables—and not disinfected," with all that that meant in its addition to the sum total of human suffering.

Here then is a definite answer to some of those foolish charges made by reactionaries. It is true that even Doctor Keen's word will not serve to close those slandering mouths. He has written much in defense of his profession and has been made the subject of vituperation in return. Nevertheless, the thoughtful will pause and ponder these things. They will realize that idle chatter and proof-less affirmations can not be taken as statements of fact.

GOSSIPING AND CARELESS TALKING

In the journal of one of the state medical associations, *The West Virginia Medical Journal* says, there is a statement to the effect that the Committee on Medical Defense is called upon to defend one of its members against the accusation that he had used too much diphtheria antitoxin. In another section of the state, suit is brought against another member for malpractice because he did not use a sufficient amount of antitoxin. It seems, our contemporary opines, that here again the truth is proved of the old saying, "damned if you do and damned if you don't."

"Possibly," the editor continues, "physicians are themselves responsible for many of the suits brought against members of the medical profession for alleged neglect. We are all too prone when we are told of various things, either by our own patients or by mutual friends

of some other man's patients, to make a criticism as to what was done, or what was not done. It is possibly the 'gossip sense', or instinct, which has apparently been handed down to us from the time when Adam was a boy, which makes us comment. How very important it is for us to refrain from making comment upon the treatment administered by our fellow physicians! We do not know the circumstances surrounding the majority of instances, unless we have been called in consultation in these cases. We do not know the indications or lack of indications for certain therapeutic procedures which may have been or may not have been administered, and there are none of us, at least none that have come under our personal acquaintanceship who are so infallible as to be justified in criticizing about things of which we know nothing."

RELIEF WORK IN RUSSIA

According to notices in the daily press, figures that are stupendous continue to be reported by the American Relief Administration in its great humanitarian work in Russia. We learn, from a newspaper clipping, for instance, that 178 carloads of government surplus medical stocks were received from America in Moscow during June, and 186 during July. These receipts brought the total of boxes, bales, barrels and crates received in Moscow to 97,119 since the beginning of operations—a truly tremendous quantity of medicine, hospital supplies, disinfectants, vaccines and the like. In all, 82,085 of these packages had been shipped to institutions and dispensaries, including a sanitary train of 32 carloads to carry relief to cities and towns outside the areas in which the medical division in charge of this stupendous work had permanent organizations. The personnel included 23 physicians, 14 property men and two stenographers; all Americans, of course.

It is no wonder, in view of these figures, that the American Relief Administration is able to report satisfactory progress of the inoculation campaign and lowering, if not conquest, of the incidence of cholera and the gastrointestinal diseases in the districts where its medical division has been able to organize on an extensive scale.

Though much has been done, however, it would appear that the work is far from finished; nor are the workers appalled by the magnitude of their task, as witness these extracts from the report just to hand:

"All infectious diseases remain extremely prevalent throughout Russia. Statistics supplied by the Government are unreliable, but reports received from our district physicians generally indicate that typhus and relapsing fever are ubiquitous and epidemic at many points in spite of the fact that summer weather has afforded the population an opportunity to rid themselves of lice. These diseases have been disseminated among all villages and towns by refugees returning to their homes from infected areas and by speculators and others who have overrun the country. Lowered resistance incident to starvation has rendered the population an easy prey.

"With the advent of cold weather and increase of vermin infestation, extensive and severe epidemics of these diseases will recur and Russia will continue to remain a menace to Western Europe, especially as emigration increases.

"We can not assume responsibility for the protection of Western Europe, but, realizing the great importance of the work on the Western frontier, we are extending every assistance possible. Our headquarters are at Minsk and Kiev, and we have subdistrict warehouses at Gomel and Vitebsk, from which we are making large allocations of all classes of supplies."

THE USE OF DIGITALIS FOR REDUCING POSTOPERATIVE COMPLICATIONS

An article by Drs. Geist and Somberg, of New York City, (Am. Jl. Obstet. and Gyn., August, 1922, P. 135) points out that "postoperative complications, especially those involving the respiratory tract have always caused the surgeon considerable anxiety. In spite of improvements in the methods of administering anesthesia, careful pre- and postoperative care, the refinement of operative technic and the rapidity of operative procedures, we have been apparently unable to reduce the number of such cases materially."

"One may for purposes of classification group postoperative complications under two large headings—vascular and nonvascular. Under vascular complications, the pulmonary group are more important. Pulmonary complications in almost all instances are dependent on postoperative vascular conditions."

"We all have noted the fall in pressure following operation, due usually to diminution of cardiac efficiency, and it is this fall in pressure that results in stasis in the smaller arterial and venous radicles. The first 24 hours after operation, in all probability, determine, to a great extent, the pneumonic or other vascular complications. We have mentioned the so-called hypostatic pneumonia and we feel that practically all postoperative pneumonitis has an analogous etiology. The other pulmonary complications, embolism or thrombosis, may be

grouped under vascular lesions but just how much they are influenced by a maintenance of the pressure level can only be judged after observations on a very large series of cases. Phlebitis is occasionally due to trauma during the operation, but usually it is due to stasis and infection and it too may react favorably to an improvement in the cardio-vascular activity. Postoperative shock is still an unsolved problem, but we know that there is a marked fall in pressure in these cases of shock, just as in other postoperative conditions. If the pressure can be maintained either partially or totally, the shock will be very much lessened. The asthenia seen following operations, where there is no source of septic absorption, is always associated with a low pressure, but here cause and effect must be closely differentiated."

"With the above in view it is reasonable to assume that any measure which will help to maintain the pressure, and especially the pulse pressure, would also be of value in reducing the incidence of the complications dependent on vascular disturbances. We decided that digitalis, or any of its derivatives, being powerful cardiac stimulants would be of value, and a series of operative cases was investigated to determine the value."

The authors divided their cases into three groups. In one, the cases were digitalized by a so-called "rapid method." Of a total dose of the standardized tincture (calculated at the rate of 0.15 cc per pound of body weight) one-half was given 24 hours before operation; one-fourth, six hours later and the remainder six hours later.

In the second group or "slow method," the dosage was smaller and a preparation other than the tincture was used.

In the third or "control group" no digitalis was administered.

"The types of cases operated upon embraced practically all of the more severe gynecological and general surgical procedures. We attempted to use only the more severe cases, i. e., those requiring laparotomy, for digitalization. Using the "rapid method" we digitalized 27 cases."

"The blood pressure was studied carefully on a majority of these cases. The postoperative drops averaged only 3 mm. within the first 12 hours; after that the tension became normal."

"The complications in this group were limited to one case of bronchitis which was of two days' duration and was probably a direct ether result. There were none of the severe pulmonary complications or vascular lesions that one encounters in a group of operated cases."

By the "slow method," 42 cases were digitalized. The postoperative pulse was excellent in all cases but one, the average drop of pressure being only 5 mm. The complications in this group consisted of one case of bronchitis, probably irritative in cause.

"We can sum up these two groups by saying that there were practically no complications. The postoperative course was excellent and there were no pronounced ill effects from the digitalis. The blood pressure drops were minimal, the pulse pressure being maintained throughout."

In the 39 undigitalized cases of the "control group" the average pressure drop was 14 mm. postoperatively, compared to the 3.5 mm. of the digitalized cases. The alertness and also the rapid recovery seen in the digitalized cases was missing.

"The total percentage of complications is 27 per cent in these undigitalized cases, campared to the zero percentage of complications, if one excludes the two very mild bronchitis cases seen in the digitalized groups. This is the most important and the outstanding feature of this series of experiments."

"Summing up the observations made in the three groups of cases we must be impressed by the fact that in the digitalized cases the pulmonary complications have been definitely lower, that other annoying and at times serious complications have also been minimized and that the method used to obtain these results is free from danger to the patient and is easy of administration."

The authors refer to the work of Mandl whose article on the "Statistical Study of Postoperative Pulmonary Complications," etc., appeared in the *Wiener Klin. Woc.*, Vol. 34, p. 214, 1921.

In his attempts at prophylaxis, Mandl used a digitalis preparation (Digipuratum), 3 to 4 cc intramuscularly in the deltoid, at once or one-quarter hour after operation. A painful infiltration resulted unless sufficient massage was given. He was able, however, to obtain a reduction of postoperative lung complications from 27% to 8%.

In the discussion of this paper it was brought out that Dr. Geist recommended the preoperative use of digitalis "in all cases irrespective of what the condition is." "The use of a digitalis preparation in cases with normal heart or diseased heart is of decided benefit as it results in the *maintenance* of the blood pressure after operation, though the pressure and pulse rate *before* operation in a case with a *normal heart* is not influenced.

Abstracted in the Library of H. K. Mulford Company.

Leading Articles

Bookkeeping System and Procedure for Physicians

By F. A. HOURIHAN, A. M., Chicago, Illinois
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EDITORIAL COMMENT.—To the accountant, Mr. Hourihan's outline of a bookkeeping system for physicians will undoubtedly appear highly efficient. It is another question how well it can be carried out in practice. No doubt, the general practitioner, who enters his charges and receipts as he goes, would find it impossible to carry such a (seemingly) complicated set of books. However, we believe that the system is susceptible of simplification. In any case, more business-like methods of keeping accounts are urgently demanded than those that have been in use.

THE practicing physician has, undoubtedly, more than once realized his need for a simple and effective bookkeeping system, one that will give him an accurate record of his professional practice and that may be handled satisfactorily by a competent office clerk. The Federal income tax has imposed an obligation on professional and business men in a way that accurate accounting records are required, but this alone should not be the impelling motive. For, like the business man, the professional practitioner is continually met with the searching *Quo vadis?* and, unless he has some kind of records, he can never know whither he is tending. Aside from this, the physician must realize the importance of systematic office routine and the adverse effect of the opposite, for the patient expects, in the doctor more than in any other, the highest degree of competency.

The outline prescribed in this article aims at simplicity in an accounting system suitable to the average physician's practice. Some physicians have a staff of clerical help, including an office clerk, a cashier and a bookkeeper; but, for the purpose of the system outlined here, all three offices may be handled by the one individual.

The principal record books ordinarily required in a physician's office are (1) a general journal, (2) a cash book, (3) a general ledger; if the physician has a fair-sized practice, (4) a patients' charge journal and (5) a patients' ledger will be needed. In addition to these, it will be convenient and desirable to have some auxiliary records, such as (6) a patients' appointment book, (7) a petty cash book, (8) a record of the physician's daily calls, (9) a bank check register or check pad, and (10) an entry memo pad. This entry memo pad will be used by the physician to record his charges to individual patients and will be filed on his desk to be collected by the office girl or bookkeeper for making the book entries. These various records will be treated separately, although not in the order given here.

Patients' Appointment Record

A record of appointments made by patients with the physician will be found convenient, for a list of appointments can be readily taken from this book and placed on the physician's desk each day, or given to him when he starts on his daily calls. Any simple form may be used for this purpose, such as an ordinary diary; but the form illustrated in Fig. 1 will, in most offices, be found practical and convenient. This record should show the date, the

Appointment Record

Date 1911	Patient's Name	Address	Telephone	Kind of Treatment	A.M.	P.M.	Remarks
Nov. 1	Mr. F. Jameson	2347 Regent Ave.	Oakland 2615	Examination			
	Mrs. T. L. Cooper	2516 E. St.	Mercury 1704	Consultation			
	Miss Louise Young	2222 Parkinson Ave.	Oakland 4321	Treatment for Chills			Treatment for Chills

Figure 1

patient's name and address and the nature of the service. Any other important details may be added. As many of the appointments are likely to be made by telephone, this book can be kept on the telephone stand or on the office girl's desk. When appointments are for the present day, the exact time may be indicated by a check mark in one of the small columns showing quarter-hour divisions for the morning and afternoon; but, if appointments are to take place two or three days in advance, a memo to this effect may be entered in the "Remarks" column, as indicated in Fig. 1. Each morning, a list may be made of these advanced appointments which were previously arranged for that day.

Entry Memo Pad

When each patient has been treated, the doctor should make a memo of the patient's name, the nature of the treatment, and the charges. This memo may be somewhat like the following:

No. *126*

ENTRY MEMO

Patient:	Geo. M. Lawrence		
Address:	2318 Maple Avenue		
Treatment:	X-Ray for arm	$15.00	
	Bandage and splint	3.50	
	Prescription	1.00	$19.50
	Paid Cash		5.00
O.K.	Balance due		$14.50

Fig. 2—Entry Memo Pad

These memo slips will be used by the office clerk or bookkeeper for making book entries and the classification of charges indicated here by the physician will enable the clerk to make proper classification in the columnar cash book or patients' charge journal (Figs. 3 and 6), explained later. If the patient has this fee charged to his account, then the physician may file these memos on a spike file on his desk, to be collected and entered on the books later by the clerk; but, if the patient pays cash, the physician would give him this memo to be presented to the clerk or cashier who will file them on her desk for entry in the books. If he pays part cash at the time and has the rest of the fee charged to his account, the memo slip should be taken to the cashier rather than having it filed on the physician's desk. For it is important that all cash items of this nature should pass through the cashier's office and that a memo explaining where it comes from or where it goes to should accompany the cash.

It would be well also to have these memo slips numbered successively as indicated in the upper right-hand corner of Fig. 2, for these numbers will be convenient in checking up on receipts or charges. If desirable, separate pads may be used for cash and charge, but this separation would be inexpedient for obvious reasons. The making out of these entry memo slips in the way suggested in Fig. 2 will be a small matter, and this little detail in the beginning of things will do much towards systematizing the office procedure and will be beneficial to the bookkeeper and to the physician as well.

Cash-Receipts Book

While a simple form of the cash book may be used, with one column for receipts and another for payments, yet a professional man would find it preferable to have a columnar cash record which would give a convenient classification of his income and expenditures. Forms providing for such a classification are shown here in Figs. 3 and 4, one for cash receipts and another for cash disbursements. All cash received from any source should be entered in the cash-receipts book. The form of this book may be arranged so as to show in a convenient way not only the amount of cash received but also the source or sources of it. For illustration, the Cash Receipts Book in Fig. 3, shows a Cash Debit column for entering all cash received, and the credit columns to the right indicate whether this cash has been received in payment on accounts owing by patients or whether it represents income from services rendered, such as Prescriptions, Sur-

gery, X-Ray, or any other miscellaneous items shown here under the heading Sundry. (See Fig. 6 for suggestion on classification).

The illustrative entries in Fig. 3 will make this point clearer. The first entry for November 1 shows that a prescription has been written for which $1.00 cash is received. This is entered in the cash-receipts books by charging the cash account or the Cash Dr. column and crediting

Cash Receipts Book

Date 1922	Patient's Name or Explanation of Entry	Ledger Page	Cash Dr.	Bank Dr.	Accounts Receivable Cr.	Prescription Cr.	Surgery Cr.	X-Ray Cr.	Sundry Cr.
Nov. 1	Geo. Lawrence on account	12	5 00		5 00				
	Rec'd. insurance	12	2 00		2 00				
2	Extracting tooth with treatment and prescription		3 00			1 00			2 00
3	Deposited to bank			100					

Figure 3

be given later. It might be well to mention here, however, that the "sundry" column in the Cash Receipts Book will not have an account by this name in the ledger. "Sundry" is used here for miscellaneous income items of various kinds that do not occur frequently enough to require a special column for each class in the Cash Receipts Book. Each class of items composing "Sundry" will, however, have an account representing it in the ledger. For example, in the entry for Nov. 2, the credit of $2.00 in the Sundry column represents income from extracting and treating teeth; hence, if desirable, Extracting Account and Teeth Treatment Account may be set up in the ledger, each credited with $1.00. Ordinarily, dental work of this kind is not carried on to any extent by a physician and the one ledger account called Dental Service will suffice for all service of this kind.

Prescriptions. The entry for November 2 assumes that a patient has had a tooth treated and extracted and a prescription written, the total fee being $3.00 which was received in cash. This is entered by charging Cash for the total amount of $3.00 and crediting Prescriptions $1.00 and crediting "Sundry" income with $2.00.

The second entry for November 1 is somewhat different. This shows that the patient, Geo. M. Lawrence, has paid $5.00 to be applied on his charge account. Cash transactions dealing with charge accounts of patients should show the patient's name, for it is necessary to know the name in order to give the patient credit in his ledger account for the amount of his payment. It is not necessary to show the patient's name when he pays in full at the time the treatment is received; all that is needed in this case is, to show a charge to Cash and a credit to the particular income account. When Geo. Lawrence pays $5.00 on his account, the entry in the cash receipts book will be a debit to Cash and a credit to Accounts Receivable. Each of these columns in the Cash Receipts Book represents an account in the ledger, such as Cash, Bank, Accounts Receivable, Prescriptions, Surgery, and X-Ray. The items in each of these columns will be transferred or "posted" to the respective account in the ledger. This posting is not done item by item, but rather the total of each column at the end of the day or at the end of the month is posted to its proper ledger account, and hence these ledger accounts are a brief summary of the various transactions taking place during the period.

A fuller discussion of ledger postings will

Cash-Disbursements Book

All cash paid out, either in currency or by check, should be recorded in the Cash Disbursements Book (Fig. 4). When cash is paid out, it is credited to the Cash account (or to the Bank account, if by check) and the offsetting debit is made to whatever account represents the expenditure. In Fig. 4, the entry for Nov. 5, shows that $50.00 has been paid out for an office desk. Since this disbursement was made by issuing a check on the bank, the credit is made to Bank account and the debit entered in Sundry column, since purchases of this kind

Cash Disbursements Book

Date 1922	Acct. Debited or Explanation of Entry	Ledger Page	Sundry Dr	Cash Cr.	Bank Cr.	Check Number
Nov. 1	Deposited to bank			100		
	Per contra					
5	Office furniture		50 00		50 00	131
	Purchased desk					

Figure 4

are not so frequent as to require a special column for office furniture. In a case of this kind, where a special column is not provided for the particular transaction or class of transaction, it is necessary to give the account name in the explanation column. For instance, the $50.00 in the Bank Cr. Column is self-explanatory, while the $50.00 in Sundry Dr. column is not. When Cash or Bank is credited, we know

at once that cash (either currency or check) has been paid out; but, when the Sundry column, which takes in miscellaneous items, is debited, we need further explanation as to what particular account to charge in the ledger. Hence, in the entry for Nov. 5, we indicate in the Explanation column that Office Furniture Account in the ledger is to be charged. Other cases, where it is necessary to indicate the particular ledger account in the explanation column, are shown in the entry for Nov. 3, in both Figs. 3 and 4. The first entry for Nov. 1, in Fig. 3, does not need an explanation, for the entry of $1.00 in the Cash Dr. Column shows that cash has been received and a similar entry in Prescription Cr. shows the particular class of income representing this cash received.

It is important that separate accounts should be kept for office cash and for bank cash. The Cash column in both the Receipts and Disbursements books, represents the general cash or currency that actually passes through the cashier's office, while the Bank column in both books represents the bank deposits or withdrawals. Office receipts should be deposited regularly (daily) and, when deposit is made, an entry should be put through debiting Bank and crediting Cash. The debit will be made in the Cash Receipts Book and the credit in the Cash Disbursements Book, with a cross-reference note in the Explanation column of each book, as in the entry for Nov. 3, Figs. 3 and 4. The bank pass-book will show a record of deposits and this may be checked up with the memo entry slips (Fig. 2). A petty cash fund should be maintained for minor office expenses. This will be taken up next.

Petty-Cash Book

An important supplement to the Cash Receipts and Disbursements books is the Petty Cash Book. This book is used to keep a record of minor office expenditures. A small amount of cash is kept separate for this purpose, and in this way all office receipts may be deposited daily, thus relieving the cashier of the responsibility of carrying cash on hand and affording a systematic record of cash items. Fig. 5 shows a suitable form. Columns may be used here for any desirable classification of items. to establish the petty-cash fund, a check is drawn on the bank for some amount, say $50.00, and at the same time an entry is put through by crediting the Bank column in the Cash-Disbursements Book and debiting Sundry Column in the same book with a note in the explanation column indicating that Petty Cash Account in the ledger is to receive the debit posting. This check is then cashed and the currency is put in the petty-cash drawer, separate from any other office cash. As this petty cash is paid out from time to time for such minor items as freight charges, telegrams, postage stamps, messenger boy, and the like, a record is made in the proper columns in the Petty Cash Book, as illustrated in Fig. 5. Each time petty cash is paid out, the cashier or clerk should obtain a receipt or voucher of some kind. When this is done, the cash in the petty-cash drawer plus the sum of the receipts or vouchers will always be equal to the amount of the petty-cash fund originally established. Equal debits and credits are not shown in the petty-cash book for each entry, as in other books discussed, for the petty-cash book is a memorandum record only and is not a book of accounts. Accounts for the various classes of items are kept in the ledger and posting is made to them from the disbursements book.

The amount of the petty-cash fund should be sufficient to meet minor expenses for some stated period, such as, one month. The fund will be reimbursed by drawing another check at the end of the month, or earlier if needed. When it is necessary to reimburse the fund, the clerk will prepare a statement of the amount of petty cash paid out during the month or period and attach to this statement the receipts or vouchers covering the expenditures. These statements and receipts will be filed for the protection of the cashier, in case an audit should be made at some future time. When the new check is drawn on the bank, it will be for the amount that had been paid out. For instance, if the original fund is $50.00 and during the month $45.00 has been paid out for various items, the new reimbursement check will be for $45.00, thus reestablishing the fund at its original amount of $50.00. In this way, the petty-cash fund will always be kept at the original amount, either in the form of cash or in cash and vouchers. At the time the reimbursements check is taken out, the entry in

Petty Cash Book

Date 1911	Explanation of Entry	Sundry Medical Supplies	General Office Expense	Auto Expense	Total Daily Disbursements	Daily Balance
Nov. 1	Fund established					50 00
1	Stamps		1 00			
	Telegraph		1 25		2 25	47 75
3	Express and Cartage	1 35				
	Expenses			2 60	3 95	43 80

Figure 5

the cash record will be a credit to Bank in the Cash Disbursements Book and the debit is entered in the Sundry Column in the same book, showing also the various classes of items or charges in the Explanation column. In effect the entry will be this:

Debit Sundry (in Disbursements Book) .$45.00
Credit Bank (in Disbursements Book) .. 45.00

To reimburse petty cash for the following expenditures as per File No.....:

Telegraph	$2.85
Telephone	4.10
Light	5.15
Messengers	6.50
Express and Cartage	12.80
Office Cleaning	10.00
Office Supplies	4.10
	$45.00

Posting will be made to the various ledger accounts from this itemized statement appearing in the Explanation column. The Petty Cash Account in the general ledger will never have more than one entry which will be a debit of $50.00, or whatever the amount may be, entered at the time the fund is originally established.

Patients' Charge Journal

Nearly every physician has charge patients and, where there are many of these, it is advisable to have a separate charge journal and a ledger so that a ready and convenient record may be had of patients. Fig. 6 shows a form of Patients' Charge Journal that may be adapted to any office. The Accounts Receivable column will be charged for the amount of the patient's bill and the offsetting credit will be entered in one or several of the income columns to the right. The various credit columns afford a convenient classification of income from charge accounts. (See Fig. 3 for suggestive classification). The first entry for Nov. 1 shows that Geo. M. Lawrence has received treatment amounting to $19.50. This is entered by charging Accounts Receivable Dr. column for $19.50, and crediting X-Ray $15.00, Prescriptions $1.00, General Practice Office $3.50. An itemized statement should be shown in the Explanation column, as in Fig. 6. The columns under the heading "General Practice" may take in items of a miscellaneous nature; but items that occur frequently, such as Prescriptions, X-Ray, and the like, may have separate columns for each class. These entries will be made in the Patients' Charge Journal from the entry memo pad shown in Fig. 2.

In the entry above, the amount of Geo. Lawrence's bill, for Nov. 1, is $19.50; but he paid $5.00 at that time leaving a charge balance of $14.50. For convenience, as pointed out in our discussion under the heading Entry Memo Pad, when service is part cash and part charge, it is well to make a charge bill for the full amount and give the patient credit for his cash payment. The first entry in Fig. 6 will illustrate this point. When this entry was made in the Patients' Charge Journal charging Geo. Lawrence the full $19.50, at the same time he was given credit for $5.00 in the Cash Receipts Book.

This procedure is objectionable from an accounting point of view, for on the face of it, it overstates the actual charge accounts. The charge accounts, as shown by the Patients' Charge Journal, do not in this way accurately

Patients Charge Journal

Date 1922	Patient's Name and Address	Explanation of Entry	Ledger Page	✓	Accounts Receivable Dr	Gen'l Practice Office Cr	Gen'l Practice Res. Cr	Gen'l Practice Night Cr	Prescriptions Cr	Surgery Cr.	X-Ray Cr.
Nov	1 Mr. M. Lawrence 231 Maple Ave	Treated for corporal injury	12		19 50	3 50			1 00		15 00
		X Ray			15 00						
		Cardiac Stimulant			1 00						
		Consultation			3 00						
		Visit			1 50						
		Calls per card book			3 00						
		Medicine per bottle			75						
	2 Mrs. F. J. Carter 247 N. 11th street	Treatment			2 00	1 00			1 00		
		Examination			1 00						
		Prescription			1 00						
					3 00						

Figure 6

represent the amount of credit practice the physician is carrying on with his patients. Neither is the amount of cash business correctly represented in the income (Prescription, Surgery, X-Ray, Sundry) columns of the Cash Receipts Books. While somewhat disadvantageous from this point, the procedure outline is suggested, as this method of handling part cash and part charge service with patients offers greater sim-

plicity in the end. However, both the charge business and the cash business for any period may be accurately determined with this procedure. If desirable, an additional memo column may be included in the Patients' Charge Journal for "net charge".

Patients' Ledger

Each patient carrying a charge account will have an account or page in the Patients' Ledger. This should be a loose-leaf book, so that additional pages may be inserted in case one page is not sufficient for a patient's account. The ordinary ledger form will answer the purpose. The ledger page is divided down the middle, the left-hand side being for debits and the right for credits. The left half contains columns for date, entry or explanation, journal page, and debit amounts. The right half is similar in form, excepting that the last column is for credit amounts.

Postings are made to the Patients' Ledger from the Patients' Charge Journal and from the Cash Receipts Book. The amounts appearing in the Accounts Receivable debit column opposite the patient's name in the Patient's Charge Journal are posted to the debit of his account in the Patients' Ledger, and his ledger account is credited with the amounts appearing opposite his name, in the Accounts Receivable credit column of the Cash Receipts Book. When each charge account item has been posted in this way, the ledger page should be inserted in the ledger page column in both the Patients' Charge Journal and the Cash Receipts Book. At the same time, a check mark (√) will be made in the check column indicating that the item has been posted. So far as the check on posting is concerned, this is not sufficient. For instance, in Fig. 6, the check opposite $19.50 indicates that this amount has been posted to Geo. Lawrence's account in the Patients' Charge Ledger, but it does not show that the various items making up this $19.50 have been posted to the credit of the respective income accounts. These various credit items will not be posted separately. The total of each credit column (Prescription, X-Ray, Surgery, Etc.) in the Patients' Charge Journal will be posted to its own proper account in the General Ledger. These column totals will be checked off when posted.

Similarly, the totals of the income columns (Prescription, Surgery, X-Ray, etc.) in the Cash-Receipts Book, as well as the totals of the Cash and Bank columns in this book, will be posted to their proper accounts in the General Ledger. In other words, the amounts appearing in the Accounts Receivable column, in both the Patients' Charge Journal and the Cash Receipts Book, are posted item by item, while the other columns (except Sundry columns) are posted in total. As the Sundry column contains various kinds of minor items, these will have to be gone through and posted in detail to the corresponding accounts in the General Ledger. There is another point to be remembered in connection with the posting of the Accounts Receivable column from both the Cash Receipts Book and the Patients' Charge Journal. In addition to being posted item by item in the various accounts of individual patients in the Patients' Ledger, the totals of these accounts-receivable columns are posted to the Accounts Receivable account in the General Ledger. This latter posting is done for the purpose of having in the General Ledger a controlling account (Accounts Receivable Account) representing the Patients' Ledger. The debit and credit of this controlling account should equal the sum total of the respective debits and credits of the Patients' Ledger. Hence, the bookkeeper has an easy check on the accuracy of the postings by comparing the debit and credit of controlling account with the total debits and the total credits respectively in the Accounts Receivable column in the Patients' Ledger.

General Ledger

The General Ledger is the same in form as that given for the Patients' Ledger. This should be a loose-leaf book with a separate page for each account. The General Ledger contains an account for each class of items. (See list of general ledger accounts below). When the patients' ledger is used, the general ledger does not contain accounts with patients, but rather it contains the accounts receivable controlling account which represents the patients' ledger and therefore represents the accounts of all patients.

General Journal

In addition to the cash book (which records all cash transaction) and the patients' charge journal (in which are entered all charges to patients' accounts), a General Journal is also needed. This will record all transactions except cash transactions and patients' charge transaction, such as the recording of capital invested, purchases on account, notes payable to creditors, and any other transactions not belonging to the cash books or to the patients' charge journal. The closing entries are also put through the general journal for closing out the income and expense accounts at the end of the month or period. The form of the general journal is simple, with columns from left

to right for date, explanation or entry, ledger page, debit, and credit.

General Ledger Accounts

The classification of accounts will necessarily depend on the requirements or conditions in each physician's practice, but the following list will ordinarily be sufficient or at least typical.

Assets
- Cash
- Petty Cash
- Accounts Receivable
- Notes Receivable
- Office Furniture
- Surgical Equipment
- Library
- Medicine on Hand
- Medical Supplies on Hand

Income Accounts
- Income from Prescriptions
- Income from Surgery
- Income from X-Ray
- Income from General Practice
- Miscellaneous Professional Income
- Interest on Bank Balance

Liabilities and Capital
- Accounts Payable
- Notes Payable
- Mortgage Payable
- Reserve for Depreciation—Equipment
- Reserve for Depreciation—Automobile
- Capital Investment (or Capital Stock)
- Drawing Account
- Profit and Loss (or Surplus)

Expense Accounts
- Office Rent (or Taxes)
- Office Expense—General
- Office Expense—Professional
- Secretarial Expense
- Medical Supplies Used
- Lodge and Club Dues
- Periodicals and Newspapers
- Depreciation of Equipment
- Automobile Expense
- Loss on Uncollectible Accounts

Amnesia and Analgesia in Labor

By F. GROSS, M. D., Kansas City, Kansas

EDITORIAL COMMENT.—The article which we present herewith contains an unusually fair, lucid and logical investigation of the merits of the various methods that have been proposed to alleviate the pains of labor, to lessen shock and exhaustion of the mother while avoiding an excessive rate of stillbirths and of infant mortality. Doctor Gross' report shows a remarkably patient and careful study and a thoroughly fair balancing of facts and of arguments pro and contra. He has done a great service to the general practitioners and to obstetricians in preparing this useful and instructive article.

MUCH has been written in the past twenty years about twilight sleep and other painless-labor treatment. By some, it has been violently condemned; by others, it has been just as enthusiastically eulogized. However, it is enough to point out that no amount of criticism can negative the excellent results that have hitherto been obtained and can be obtained. An apt analogy may be pleaded by saying (what every medical man knows) that a negative culture from a throat does not prove the absence of diphtheria, while a positive culture does prove its presence. It would be unfair for a physician to condemn tonsillectomy, appendectomy, hysterectomy etc., because he cannot "handle" the knife, and it would be just as unfair for a surgeon, who forgets most of his materia medica and knows only his surgical technic and scalpel, to condemn or deny the beneficial effect of drugs in certain pathological conditions. It is also unfair for a physician to condemn twilight sleep or other painless treatment of labor, because he does not know the technic or perhaps had bad results with such treatments; which, however, could be attributed to nothing else than impure drugs, overdosage and not strictly observing the technic as laid down by eminent and successful observers.

It is only fair to say that, in a busy general practice, it may often be impossible to devote the time to each case which can be given in a hospital or in a nursing home, and in many poor people's cottages the conditions are far from ideal. But, the same objection applies to those conditions in the ordinary conduct of labor in such cottages; and it is surprising what measure of success can be gotten by a resolute determination to make the conditions as good as the circumstances will permit.

This paper is written for the *general practitioner* who has no time to delve into the more than two hundred volumes that contain information on the subject, whether he wants to use amnesia and analgesia in his own practice or simply desires to advise his patient as to its value. It will deal with the Freiburg method of twilight sleep ("Dæmmerschlaf"), as originated by Gauss and Kroenig, the new modified (standardized or schematical) twilight sleep of Gauss and Siegel, the use of pantopon, "H-M-C", ether, chloroform, ethyl chloride, nitrous oxide gas and hypnotism.

Chemistry and Pharmacology of Drugs Producing Amnesia and Analgesia

Scopolamine is the most important of them all and, according to the last edition of the United States Pharmacopoeia, scopolamine and

hyoscine are identical in every respect. If we talk in the following pages of only one, the other can be safely substituted. They are alkaloids obtained from a number of different plants, the most common of which are Hyoscyamus albus and niger and Scopolia carnivoca. It is very difficult to isolate scopolamine, or hyoscine, and some of the early variable results with the use of the drug may have been due to impurities from which it had not been entirely freed. The purity can be tested as follows: add sulphuric acid and, if there are no carbonizable impurities present, the solution will remain colorless. The absence of morphine is proven when the subsequent addition of a drop of nitric acid likewise produces no color.

Scopolamine is a powerful cerebral sedative and dilates the pupils more rapidly than does atropine, but its effect in this direction seems to be short-lived. The heart and, therefore, the pulse, are slowed, as is the respiration; and the blood pressure is temporarily raised. It produces sleep, but rarely dizziness, nausea, itching, restlessness, excitation and possibly delirium. It is excreted by the kidneys and found in the urine, but all traces of it disappear from the system in twelve hours. *Overdosage* shows itself in extreme dryness of the mouth and throat, dilated pupils, dry red skin, rapid pulse and breathing, a wild talkative delirium and extreme restlessness.

It may be incidentally mentioned here that, in cases of hyoscine poisoning (e. g. children who have eaten parts of henbane plants), in the absence of pilocarpine, the administration of morphine is regarded the best medical treatment. The significance of this fact will be reverted to later.

Hyoscine increases the peristaltic contractions of the intestines and, at the same time, relieves griping. The significance of this fact will be seen when it is remembered that the uterine muscle is of the same histological character as the intestinal—i. e. involuntary; and probably, in this instance, the remark applies equally to cardiac muscle; hyoscine has a *"softening"* effect upon the cervix and, as experimentally proven, *increases the duration and height of the uterine contractions.* It must therefore be rightly considered as an *"ecbolic"*. This fact also explains why the first stage of labor is shortened under its influence. These observations do not, of course, apply to obstetric overdosage.

It is generally administered hypodermically, the usual dose being from gr. 1/200 to 1/100; in obstetrical practice, smaller doses are given and repeated when necessary; *but never pushed until the woman shows no more sign of pain!* Hyoscine in obstetrical doses has no effect on the child.

Some difficulty was experienced at first in obtaining reliable preparations. Watery solutions of scopolamine and morphine combined or of scopolamine alone were found to suffer rapid disintegration. It was then discovered by Prof. Straub, of Freiburg, that the solutions were stable if made in a 10% alcoholic solution of mannite *, and this method, together with the preparation of tablets of hyoscine-morphine (or, still better, hyoscine-morphine-cactoid, "Abbott") and hyoscine alone, gives a choice of perfectly reliable preparations. If tablets of the drugs are preferred, hard water must on no account be used as a solvent; only boiled rain water or distilled water.

Morphine is too well known to all practitioners to require any discussion here. However, I must mention some derivatives and alkaloids of opium which are used by some observers in conjunction with scopolamine instead of morphine, to produce amnesia and analgesia in labor. Before doing so, I must say a few words about Hyoscine, Morphine and Cactoid Compound (H-M-C), which was introduced by The Abbott Laboratories in 1905, and is put up in full and half-strength tablets. Hyoscine-morphine-cactoid #1 (full strength) contains: Hyoscine hydrobromide, gr. 1/100; Morphine hydrobromide, gr. 1/4; and Cactoid, gr. 1/64; and this excellent and reliable preparation has been used by thousands of physicians in producing surgical and obstetric anesthetic somnolence.

Where it is impossible for a physician to remain constantly with his patient during labor, or where the hypodermic route is undesirable, Hyoscine-morphine-cactoid *modified* #1 (full strength and containing hyoscine hydrochloride, gr. 1/400; morphine hydrobromide, gr. 1/16; cactoid, gr. 1/128; pilocarpine hydrochloride, gr. 1/64; caffeine, gr. 1/32), may be given by the mouth to relieve the false "nagging" pain, nervousness, rigid os etc. The addition of pilocarpine (a powerful antidote of hyoscine) and of caffeine (a stimulant, diuretic and ecbolic!) prevents locking up of the secretions and thirst. Nausea, headache and other unpleasant after-effects are rarely observed. In ordinary cases, a single dose will prove effective, but occasionally a second tablet may be ordered if conditions are not relieved within an hour.

*Obtainable in ampules as "Scopolamine stable, Roche" from the Hoffman-La Roche Chemical Works, New York City.

Narphin (known in Europe as Narcophin) is narcotine-morphine meconate, and contains in its molecule about 30 percent of morphine alkaloids. It has been observed that narcotine, although having no hypnotic and analgesic properties of its own, remarkably increases those of morphine, the best results being obtained by a combination of a molecule each of morphine and narcotine. The narcotic action of the Narphin sets in somewhat later than that of morphine, but it persists much longer, and, upon awakening, there is freedom from the characteristic stupor and malaise. Narphin exerts a high degree of analgesia and affects the respiratory center much less than morphine. The average dose is Gm. 0.03 (gr. ½) which corresponds to morphine Gm. 0.01 (gr. 1/6).

Narphoquin (known in Europe as Amnesin) is narcotine-morphine lactate with quinine and urea hydrochloride. The addition of the quinine and urea hydrochloride not only promotes labor pains, but also enhances the morphine effect, so that less than half the dose of morphine ordinarly employed is found necessary. Each 1-mil (Cc.) ampule of narphoquin[1] contains Gm. 0.2 (gr. 3) of the quinine salt and narcotine-morphine lactate Gm. 0.012 (gr. 1/5) which corresponds to morphine Gm. 0.004 (gr. 1/16).

Laudanon is a mixture of the following six alkaloids of opium: morphine, 10 mg.; narcotine, 6 mg.; codeine, 1 mg.; papaverine, 2 mg.; thebaine, 0.5 mg. and narceine 0.5 mg.; or a total of 0.02. This compound is more rapid in action than narphin, but the effect does not last as long. Very satisfactory results are reported with the use of this preparation, from Prof. Doederlein's Clinic at Munich, by E. Zweifel, in doses of Gm. 0.02 and 0.04, and my own experience with this drug has been very satisfactory. Each 1-mil ampule of Laudanon[2] contains a total of Gm. 0.02 of the above-named alkaloids which corresponds to morphine Gm. 0.01 (gr. 1/6).

Pantopon (pantopium hydrochloricum). Prof. Sahli succeeded in producing the derivative of opium which combines the special advantages of opium and morphine without certain disadvantages incidental to each; it contains the *total* alkaloids of opium in the water-soluble form of their hydrochlorides, but is free from their inert and injurious extractive matter. D. I. Macht of the Johns Hopkins University, who made extensive studies and experiments with the alkaloids of opium, states: "One grain of pantopon is equivalent to extract opium gr. 2.5, or of powdered opium gr. 4, or tincture of opium 45 minims and has a more efficient and less depressant effect than morphine." It is a preparation which deserves careful investigation and consideration, and is put up in 1/3 grain tablets and also in 1-mil ampules[3] containing 1/3 grain of the drug which corresponds to morphine Gm. 0.01 (gr. 1/6).

Hemypnone is a mixture, and each tablet contains: diacetylmorphine 0.0032, Dial "Ciba" 0.0018, anesone 0.5. It is intended for oral administration *without* the use of hyoscine. The first tablet is given when the dilation of the cervix reaches a diameter of a fifty-cent piece. The second tablet is given about 45 to 60 minutes after the first, and two or three more tablets are given three or four hours apart. I have given this preparation a fair trial and came to the conclusion that the other preparations mentioned above are far more efficacious and reliable; also less expensive.

The chemistry of ether, chloroform, ethyl chloride and nitrous oxide gas is too well known to require any mention here and their effect and value in labor will be fully described when discussing "other methods producing amnesia and analgesia."

Different Methods Used

So many different methods and drugs have been used in producing amnesia and analgesia in labor and so many modifications adopted, that it is small wonder that the reports as to success or failure of the method should be so varied. There is

1.—**The "One-Dose" School.** One can only say that the single injection is merely a minor palliative covering in many cases only a small fraction of the time occupied by the whole labor, as the effect passes off in from two to four hours.

2.—**The "Standardized Dosage" School,** or routine treatment, which an experienced nurse could equally well carry out, and dispense with the continuous presence of the accoucheur. Siegel, while an assistant at the Freiburg Clinic, first developed a routine treatment for the induction of twilight sleep with scopolamine-narphin; rather high successive doses were given every one and one-half hours, and every third dose of scopolamine was combined with narphin, gr. ¼, irrespective of anything else—*the memory test was dispensed with.* This method was given up in 1910 on

[1]Narphin and narphoquin can be obtained from Merck & Co., New York City.

[2]Obtainable from E. Bischoff, 82 West Broadway, New York City.

[3]Obtainable from Hoffmann-La Roche Chemical Works, New York City.

account of increased infant mortality due to overdosage with narphin. However, in the following years, Siegel elaborated several modifications which all met with the same verdict until he succeeded with his Narphoquin—twilight sleep ("Amnesin-Daemmerschlaf")—, a "morphine-poor" treatment which indeed gives good results and is fully described below, including the new modified (standardized) method of the Freiburg Clinic. But, it must be stated right here that no physician is likely to meet success with the "modified" or "standardized" methods if he does not master all the details of the old and original twilight sleep of the Freiburg school and including the so-called memory test.

3.—**The "Individualization" School,** which includes all the observers who modify their dose with their deductions from constantly repeated and frequent testing of the patient. This must at once be adjudged by far the rational method, because, excluding those varieties which are wide enough to be fairly grouped under the term "idiosyncrasy," there still is a very diverse response to the drugs in different women. And, since there is no means of detecting the diversity of response before the actual administration is begun, the only scientific solution of the difficulty in our present state of knowledge is the strict individualization, and Gauss's words still are true; "if you could trust to having an average woman, you could use an average dose; but the dose is easier to regulate than the woman." There is no department of medical work where the individuality of the doctor can display itself better, and the amount of success gained in the method is a fair guide to the accoucheur's capacity to gauge the mentality of his patient.

The basic requirements of any method given with the object of reducing labor pains must include the following principles:

1.—A considerable reduction of the suffering of the mother.

2.—Any unpleasant effect which the method produces must be harmless; furthermore, the unpleasant symptoms must be less objectionable than the pains which the drugs are alleviating.

3.—The method must not contraindicate the use of a general anesthetic.

4.—Treatment should produce neither nausea nor other subjective disturbances.

5.—The regular advancement of labor must not be unfavorably influenced by a change in the uterine contractions or the abdominal pressure.

6.—There must be no harmful effect on the afterpains or disturbance of the nursing, or impairment of puerperal involution.

7.—The child must not suffer before or after birth.

8.—There must be no hindrance after birth to the establishment of the new functions either in the first weeks of existence or in the later development.

Gauss has laid down a certain broad technic and has emphatically declared that, to transgress this to any great extent, was to court failure and even disaster. Let us now consider the details of this method (and its application), which is also called:

The Freiburg Technic of Twilight Sleep

In preparation, the physician must fully acquaint himself with what he expects the drugs to do, study the literature, familiarize himself with the condition of the patient, her measurements, and the position of the child. When labor starts, the patient must be placed in a *quiet, darkened room.* It is of great value to have a nurse who has had considerable experience of this method, or a specially-trained staff.

When the labor pains have increased in force so as to produce *at least two-finger dilation* of the cervix, and recur *regularly every five or six minutes in a primipara* and *not less than seven or eight minutes* (irrespective of the size of the os!) *in a multipara,* we are ready for our first injection. It should consist of morphine hydrochloride, gr. 1/6 to 1/4, and scopolamine hydrobromide, gr. 1/150 to 1/100. Generally speaking, women of a general smaller build or of a more phlegmatic temperament respond quite well to smaller doses, while, in cases of the educated classes with a higher mental susceptibility, the larger dose may be required. As a rule, after fifteen to twenty minutes, the patient will be quiet between pains and may even sleep. During the pains, she will probably still complain, but slightly less than before the injection was made. From 45 to 60 minutes after the first injection, if all is well, we are ready for the next hypodermic. *All succeeding doses consist of scopolamine alone,* the usual amount being from gr. 1/400 to 1/200, according to the needs of the case. From now on, time plays no rôle whatever. Experience has shown, however, that succeeding injections are required every 30 minutes to two hours—the intervals becoming longer as the number of injections increases. The fetal heart, the mother's pulse and general condition must be carefully watched and the memory test should be applied every ten to

thirty minutes.

Method of Memory Test

As regards to other points in the technic, the one of most capital importance is, without a doubt, the rigid institution of the memory test. Once the importance of this is grasped and the simplicity of it realized, there can be no apology for not using it. For, in spite of what has been said to the contrary by some observers, the determination of *the presence and depth of amnesia is only possible by specific interrogation.* A description of testing, as I habitually conduct it, will serve best to illustrate the method. As a rule, amnesia can scarcely be expected to be complete until shortly after the second injection, and so it is usually only necessary to begin the testing after this second dose. In a few cases, where the drowsiness has begun quite early and the sleep between the uterine contractions is complete and as deep as normal sleep, the first test must be made earlier. For at least the first few tests, it is better to choose some object that is directly connected with the infant—e. g., some article in the infant's basket. The mother is already familiar with these, and, as the sight of one of them is likely to impress itself more strongly on the patient's memory than a strange object would, we increase the chances of the mother remembering it. Thus, we give the patient the benefit of the doubt, so to speak. Say, we choose the infant's powder-box; then, some fifteen or twenty minutes after the second injection, the mother is roused, if asleep, the powder-box shown to her, and she is asked what it is. It is necessary to be sure that she thoroughly visualizes and distinctly recognizes it, since in some of the cases dilatation of the pupils due to scopolamine may set in early and interfere with accurate visualization. Half an hour later, the patient is asked, "what did I show you a little while ago?" Some will unhesitatingly reply: "a powder-box." Others will appear as though mentally groping, and, after an obvious effort, will hesitatingly say: "a powder-box." Others make some answer which clearly shows all recollection of the incident of half an hour ago to be obliterated. Replies such as these are common: "I don't know"; "did you show me something?" "When shall I be asleep?" For, it is a curious feature that some of the patients not only forget the pains that have been occurring but may also forget that they have been asleep. We therefore gain the information that the patient is still almost unaffected, or that the memory is now quite clouded and the patient on the verge of amnesia, or that the amnesia is now complete. This information is quite positive and reliable.

Modifications of the test are readily devised, such as the question, "how many injections have you had?" The reply may be, "two." If the patient had four, the amnesia is thus known to be established. Or it may be asked, "how many pains have you had the last hour?" The answer may be, "half a dozen," whereas three or four times that number may be much more accurate. A vaginal or abdominal examination may be made the subject of a question, and other things will suggest themselves. The only care is, to be sure that the question is appreciated, whatever it is. If, at the end of a uterine contraction during which the patient showed signs of pain, she is not aware that it has taken place, this too shows in a definite way that there is loss of memory.

If all is well, then the slightest sign of a returning memory means that another dose of scopolamine must be given. The number of doses administered is of no importance—over twenty-five injections have been reported in an individual case without harm, but three to seven injections suffice in the ordinary labor case. I may here conveniently observe that patients can be roused quite easily, if there has been no overdosage, and they will carry on a perfectly rational conversation. If care be taken to do this very quietly, so that the stimulus is not too powerful, the whole incident is forgotten in a few moments.

In cases *where a difference of language or extreme ignorance or dementia of the patient* or any other reason precluded the use of the memory test, we should resort to *sensibility of the pupil and muscular-coordination test. The spinal reflex* is the best indicator of the beginning action of the drugs, but the ideal point to be reached is the state of amnesia which comes about the time that the spinal reflexes are lost. *The coordination test* is very satisfactory to prove the amnesic condition, by telling the patient to put, with eyes closed, the tips of both index fingers close together or place the index finger quickly to the tip of the nose; if the coordination is bad, then the twilight sleep is good and the amnesia sufficient.

The next point in the technic is the *shielding* of the patient, especially in the earlier stage, *from powerful sensory impressions of all kinds.* A *bright light* or a *loud noise* can so rouse the patient that the amnesic condition may not be reestablished for some time, during which period a few pains may occur. The particular stimulus, together with the pains, will be viv-

idly remembered; and, if this should occur several times, the patient will have quite a number of these recollections afterwards. The periods between will be totally obliterated and bridged over, so to speak, so that the really isolated recollections appeal to the patient as a connected whole, and she will probably assert that she knows the whole course of labor —and, as far as she is concerned, the case would be considered a failure. These are the *"memory islands"* of Gauss. The increased pain at the moment of delivering the head may act as another such stimulus; this must be guarded against by the dosage and depth of amnesia or by addition of a few drops of some general anesthetic.

In a busy city with its noisy streets or in hospital wards where many cases are together, it may be wise or even essential to *plug the ears* of the patient with a tampon of oiled wool. There shall be *no light above the level of the bed* but arranged on a table on the side of the bed away from the patient's head and low enough to keep the face in constant shadow. The importance of this is shown by the fact that, in hospital wards, amnesia is present only in 65 percent, while it is 95 percent in private wards. It must be insisted that *nurses must be absolutely quiet* and refrain from interfering with patients more than is needed. It is all-important to carry out the above-mentioned suggestions and technic to the very letter if one expects to meet with the very best of success.

Effect On the Mother

Sleep may be apparent within half an hour after the first injection. In most cases, within one hour, there is distinct drowsiness and lethargy soon merging into an apparently natural and refreshing sleep between the pains. As each pain comes on, the patient rouses and may make some remark about not yet having gone to sleep. Later, this rousing is not so pronounced, the pain is complained of less, and the patient is clearly experiencing a more restful condition. *The most important aim of the treatment*, however, is **amnesia.**

Amnesia and analgesia have been inseparately connected, and very often confused by many observers, and even the most recent literature often fails to discriminate between the two. *By amnesia, the patient becomes absolutely free from any knowledge of pain, or indeed of any recollection of the process having occurred.* The object to be attained by the use of scopolamine-morphine in obstetrics is, in fact, nothing beyond a reduction of suffering and that light degree of clouding of the consciousness in which *impressions are "perceived"* indeed by the patients, *but not "appereeived."* Painlessness is a sure sign of overdosing. It may, therefore, be definitely stated that **"analgesia"** *is no essential condition* of twilight sleep. The earlier observers strove almost without exception to obtain analgesia, and amnesia was regarded as an interesting side issue or as a further and later stage than analgesia, whereas the exact converse is the fact. With a correct dosage, when the amnesia is perfectly established, it is very rare to find a case of complete analgesia. There is doubtless some analgesia in all amnesic conditions, and this has probably led to the confusion. It is, in these cases, correct to speak of *"hypalgesia"*, but the term "analgesia" should be reserved, as it properly implies, for those cases where there is "a total absence of all manifestations of pain", and where, therefore, we may correctly say that the process of labor is painless. In the majority of cases, it is safe to say, analgesia could be produced by pushing the doses. There would, however, probably be an increased risk to the mother in many cases if this were done, and certainly the chances of fatal consequences to the infant would be very grave. As a fact, it is quite unnecessary to aim at analgesia and, therefore, we need not to court any danger to either mother or child.

In administering scopolamine-morphine, I am sure the line of demarcation between amnesia and analgesia is narrow—a slight excess of amnesia, so to speak, will usually lead to a notable analgesia—and this is why so many observers confuse the two and speak only of the latter. If the memory test is not rigidly and frequently used, it is impossible to express any opinion about the amnesia, whereas the analgesia is patent to the most casual observer.

It is therefore clear that, if one wishes to obtain the best success, it is essential that the *physician must remain* with his patient from the onset of labor to its completion. It is unfair to expect any nurse to decide continually, throughout a case, not only whether amnesia has been successfully induced, but also whether the amnesia is so deep as to be verging on analgesia. The margin between the two is so small that a delicate judgment, born of an extended experience, is needed. Whenever complete analgesia is desired, one should resort to the use of a general anesthetic.

It is an interesting speculation **how the amnesia is produced** in these cases. It is certainly a cerebral effect, largely, if not entirely, confined to sensory-motor areas. Patients ex-

amined under the influence of scopolamine-morphine show the socalled *knee-jerk to be markedly exaggerated; Babinski's sign* can also usually be elicited. *The cerebral cortex is therefore at least partially cut off from the spinal cord.* It seems reasonable, then, to assume that, in the condition of amnesia and hypalgesia, the detachment of the cerebral cortex is at least partial, and becomes more complete the nearer we approach a condition of analgesia. It is, of course, common knowledge that the amnesia due to scopolamine-morphine is temporary; events immediately before its induction and events afterwards are perfectly remembered. The loss of memory during the seminarcosis is very similar to that of old age.

An old man may still remember perfectly the history of years ago, but cannot store present events. It has been determined that the cortical cells suffer shrinkage in old age, the synapses of the dentrites of the cells must thus be less perfect, the ramifications less intimate. So that, if an impression reaches any individual cell, the stimulus is not passed on so readily to the neighboring ones; and the diffusion which is probably necessary to complete what we call memory is prevented. It is not at all improbable that, in the amnesic state induced by scopolamine, there is temporary retraction of the dentrites of the cortical cells.

This hypothesis readily explains the retention of a vivid impression during scopolamine seminarcosis, an impression such as that produced by a bright light, a loud noise, a particularly severe pain—for, in this case, the stimulus is just powerful enough to cross the increased "gap" between the cells; it overcomes the increased resistance exactly as an electric current of higher potential will "spark" across a gap which is too wide for a lower potential current. This at least gives us a useful physico-psychological basis upon which we may understand the mechanism by which means the amnesia is produced.

In view of these remarks, it is not surprising that, in an ideal case, there should be some response, such as slight movements, a facial grimace, even a groan, on the part of the patient during the pains.

Judged from the point of view of the successful induction of the seminarcosis, the subject of amnesia is of paramount importance, and no apology is needed for treating it at some length. Indeed, the association of this with correct dosage is the pivot on which everything else moves.

Restlessness has been commented upon by practically all the writers on twilight sleep. Some go so far as to describe either an active or a low muttering delirium. In any case, when it occurs, it is a further evidence of the inhibitory action of the scopolamine, showing how it really does cut off the cerebrum. A case of marked delirium indicates *overdosage*, or in very rare cases an *idiosyncrasy*. The simple restlessness that sometimes occurs can be easily controlled by occasional small inhalations of chloroform. Rhythmic contractions of the palmar muscles, and (to a less extent) the flexor muscles of the forearm have sometimes been noticed, but no importance can be attached to this.

It must be conceded that the uterine contractions after the first injection may be somewhat diminished in some cases, which is due to the morphine. But, after the second injection (scopolamine alone) has been given, full activity of the uterus is regained and labor is not prolonged if the patient is not overdosed. It has been ascertained repeatedly that the voluntary contractions of abdominal muscles are apt to be weakened, but this mistaken idea has arisen because the hypalgesia allows the action to continue without as much demonstration on the part of the patient. However, if the mother should not use the abdominal muscles, it is frequently possible to suggest, without awakening her, that she bear down. Often a dose of pituitary will complete the labor, but it must be considered that pituitrin frequently does not work as powerfully where scopolamine and morphine have been used and a larger dose, say one mil (Cc), may be required. It is certainly not difficult for the physician to apply the forceps at the second stage, provided the treatment has not been started until the cervix was at least two fingers dilated and the head engaged. If any emergency arises, the labor can always be rapidly brought to a conclusion by manual dilatation and application of instruments. If the fetal heart sounds should become decidedly slower (below 100), or much more rapid (above 150), it is always best to discontinue further injections, and if then the fetal heart does not return to normal, we should complete the labor as suggested.

As soon as the child is born, it should be removed to another room, for the outcry of the infant might produce one of the "islands of memory" which we are trying to prevent.

An early sign, universally observed in many cases, is **flushing**. In the majority, this is a general dilation of the surface vessels and is by no means confined to the face.

In many cases, there is some **dilatation of**

the pupils after a few injections, and this action of hyoscine is, of course, a perfectly familiar one and this disturbance of accommodation usually persists much longer than the amnesia.

Thirst is a common accompaniment, and the patient must have frequent drinks of water or milk (the latter especially if the labor is protracted); otherwise, the thirst may become so distressing as to tend to nullify the amnesia and leave an unpleasant memory.

One of the most important fears, based mainly on theoretical considerations, was, that **post-partum hemorrhage** would be more common and more severe. However, an impartial consideration will lead one to say that the drug has no causal relationship with the hemorrhage, and where it occurs there would probably have been severe bleeding in any event.

The influence on the **pulse is variable,** but its character is at least as good at the termination of labor as at the onset, except in cases of post-partum hemorrhage in which the characteristic rapid, running pulse is present.

Probably the most striking after-effect on the mother is the remarkable **absence of shock and exhaustion.** This is striking enough in the case of ordinary labor conducted under scopolamine, but in long tedious cases which have occupied anything from 24 to 48 hours or more, it is no exaggeration to say the results are little short of spectacular. After a deep sleep following the scopolamine labor, *the patients awake strong, refreshed and frequently ready to eat and act as nothing unusual had occurred.* This is not only my own experience; all those who have used the method, as it should be used, are agreed on the question and speak in the most unmeasured terms about the remarkable recovery of severe cases. This must give such patients a great advantage, especially if there have arisen any complications or sequelæ; for, to face such with an accompanying profound exhaustion, must seriously militate against the best recovery. The explanation is not far to seek if we accept what is stated in the foregoing. Painful stimuli have not reached the cerebral cortical cells, and this must result in a great saving of nervous energy which is there for use if needed. It ought to be mentioned that these beneficial after-effects are quite as pronounced in the cases where amnesia alone has been secured, and that the further stage of analgesia does not appear to produce any better results.

Only one word need be added regarding the **ante-natal effect** on pregnant women. The knowledge of the possibility of having scopolamine-morphine during labor undoubtedly *removes all fear* in a succeeding labor and conduces to a more settled state of mind, which must at least react favorably on the mother and the fetus. A great deal has been said of late about ante-natal care of pregnant women, and rightly so. The advantage gained by this knowledge is too positive to be lightly disregarded.

[*To be concluded.*]

Will American Physicians Continue to Appreciate American-Made Chemicals?*

By R. H. NEEDHAM, Phar. Chem., M. D., Fort Worth, Texas

ABOUT the middle of the last century, there lived a boy in the City of London, whose propensities were radically different from those of his fellows. He desired to know the composition of trees, stones, etc. He asked his father and mother many questions and, when he entered school, he asked his teachers. When he was about 12 years old, he learned of a science called chemistry from which he was able to find the answers to many of his queries. At the age of 13, discovering that, in the course of study of the City of London school, there was an extra course of lectures on chemistry being given at the noon recess, his intense interest overcame his hunger and he took the lectures, missing his lunch. Two years later, having about finished all the chemistry courses in his school, he heard of a German chemist, Hofmann, who had opened up a Research Laboratory in the Royal College of London. He thought, if he could but persuade this chemist to admit him, how hard he would work and how happy he would be. Hofmann, after looking over his credentials and talking with the boy, admitted him and, after teaching him a year, decided to place the boy in his research laboratory. Just consider that this lad had no college degree, not even a Ph.D. Yet, at 16 years of age he was considered sufficiently grounded in chemistry to do research work for

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one of the best chemists the world has ever known.

The young chemist soon found that the laboratory hours were all too short; progress was very slow. He had set himself to isolate phenanthrene from coaltar and from that to endeavor to prepare artificial quinine. So, he set up a private laboratory of his own, spending every spare moment in it. There were no holidays and, for over two years, he continued doggedly at his task. While working through the Easter vacation of 1856, he oxidized some crude aniline in a test tube by heating it with a little potassium dichromate and sulphuric acid. As the product proved to be a black tarry mass, in place of some crystalline substance, he set about clearing the test tube with alcohol. Imagine his great surprise, as he emptied the tube to find a beautiful purple solution. This was "Mauve" or "Mauvein," the first of the aniline dyes, and the boy discoverer was William Henry Perkin.

Discovery of Coaltar Dyes

Ten years later, Perkin discovered Alizarin, known as artificial Madder or "Turkey Red." This dye was derived from anthracene, another coaltar product. Hofmann's German friends vied with Perkin in perfecting a process whereby Alizarin could be manufactured commercially. The race was close, as Graebe and Liebermann filed their application for patent on June 25, 1869, and Perkin filed his one day later. Within a few years, the sale of Alizarin reached $8,000,000 annually. The madder fields were put to other uses and the French and British were dependent on German-made dyes for the red in their uniforms. Later, the same situation occurred concerning indigo.

One would think that England would have been very proud of her great chemist. Although England led the world in textiles and needed more dyes than any other country, the Government gave little encouragement and support. Students of Oxford and Cambridge did not take kindly to chemical laboratories, with their stains and smells. Much discouraged, Perkin gave up the attempt to establish the manufacture of dyes and, in 1874, Hofmann, rather disgusted, returned to Germany, taking the infant industry with him. There he found students ready, willing and anxious to work, capital ready to invest and a government which gave all the aid and encouragement needful. Enough history of the beginning of the dye industry.

Dye Industry Lost to England

Any reader of history would at once conclude that England had lost one of the greatest industries and assets that fortune had ever placed within her grasp. It is difficult to conceive how such a people as the English could have neglected so great an opportunity. They and other English-speaking peoples paid dearly for that blunder, years later.

The Germans, realizing their great advantage, stressed the dye industry almost beyond all others. As numerous companies came into existence, it was soon discovered that competition with each other was not "the life of trade." They had little to worry them in other countries, as they had a very brilliant scheme for obtaining patents on processes in England and the United States, which rendered competition nil.

In 1914, at the breaking out of the Great War, Germany manufactured three-fourths of all the coaltar products of the world and supplied material for most of the rest. Jan. 1, 1918, six leading dye companies of Germany formed a trust to last 50 years. During this period, they will maintain uniform prices, wage scales and hours of labor and exchange patents and secrets. They will divide the foreign business pro rata and share the profits. The German chemical works are well organized, strong financially and, since the war, are pushing the export trade, trying to regain that which has been lost.

Dye Industry in U. S.

Let us see what the United States did for the dye industry during the past 60 years. In one way, she has done *minus* nothing. In the first place, this country has had the most pernicious, damnable patent laws ever enacted. With our accustomed liberality and blatant democracy, we have permitted foreigners to patent processes of manufacture of anything whatsoever, notwithstanding the fact that those Governments would never reciprocate one iota. Is it any wonder that, before our advent into the war, we were declared money-mad and devoid of patriotism! What few dye companies there were in this country, were subsidiaries or branches of German firms. In other lines of chemicals, there were many well-established firms. We had tied our hands, if you please, and had furnished the ropes to do so.

There was a time when our drugs and chemicals came from the uttermost parts of the earth. To gather together those crude materials and transport them great distances, required much time. With the development of the dye industry and the multiplication of synthetic materials and medicines, much time has been saved, production greatly increased and costs lessened. But, even if our country had

the materials at hand, our patent laws forbade manufacture until after war was declared.

The Marvels of Coal

Speaking of materials, let us consider coal for one. A ton of anthracite coal will break down into about 1,400 lbs. of coke, 10,000 cu. ft. of gas, 25 lbs. of ammonium sulphate, 1½ gallons of benzol, 9 gallons of tar; the sum of the value of the total products being about 15 times that of the raw coal. Of these by-products, we are most interested in the coaltar. From it, 10 crude fractional distillates may be obtained, leaving about 60 lbs. of pitch. The 10 crudes may be converted into about 30 secondaries, or intermediates. From the secondaries, about 900 dyes are made. It is possible to make over 5,000 different dyes.

At the beginning of the war, there were miles of coke ovens along the railroads in Pennsylvania, where the object sought was coke alone and no by-products were saved to amount to anything. American chemists had long ago called attention to this awful waste of our country's resources, but the strangle-hold on the dye industry, obtained through our patent office, compelled us to keep our hands off. Bismarck declared that war developed the best in people. In a measure, he was right, as nothing else would have aroused the American people from their lethargic condition. After war was declared, efficiency experts soon discovered what American chemists had long known: that we were actually helpless as to materials for the manufacture of munitions and medicines, which were derived from coaltar and the dye industry.

Foreign-Owned Patents Sold

Mar. 23, 1918, Congress granted specific power to sell such foreign-held patents as were possessed by citizens residing in those countries which were at war with the United States. The President was thus vested with power to supervise all sales made by the Alien-Property Custodian and, by an amendatory act, was given power to waive the requirement for public sale where the public interest demanded it. Dec. 3, 1918, the President delegated those powers to Mr. Polk, the Acting Secretary of State at that time. The Acting Secretary of State thereafter issued certain orders by virtue of this power and authority, authorizing the Custodian to make sales of the patents, copyrights and trademarks to the Chemical Foundation, Inc., these patents, etc., having been seized by the Custodian under the Trading with the Enemy Act.

The Chemical Foundation

The Chemical Foundation had been incorporated for the purpose of holding patents, etc., relating to chemical and allied sciences as trustee for American industry and to promote the Americanization thereof. Furthermore, the Foundation was obligated to grant non-exclusive licenses upon equal terms and at a uniform royalty to qualified American manufacturers and to grant free licenses to the United States for any use the United States might desire to make of the inventions covered by the letters patent and similar rights. A private sale would likely prevent said letters patent, etc., from falling into the hands of purchasers who would be unwilling or unable to put the inventions to the use as intended. The sale was made April 5, 1919, and an Executive order issued by the President Feb. 13, 1920, and confirmed and ratified by the Custodian Mar. 1, 1921. This sale to the Foundation was completed openly and publicly in so far as the Executives of the Government and experts of the Army and Navy were concerned. During the time of negotiations, A. Mitchell Palmer, Attorney General of the United States, filed with the President a very complete report stating the objects of the sale and the reasons for so doing.

The Chemical Foundation was legally incorporated with a capitalization of $500,000, a board of trustees numbering 5, all of whom were men of prominence and unquestioning repute. The first President was Francis P. Garvan, who later was appointed Alien-Property Custodian. In Attorney General Palmer's report, he stated that he sold to the Chemical Foundation 4,500 patents for $250,000 with the understanding that the Foundation would use the remainder of their capital to defend their titles, should any infringements arise. Mr. Palmer did not place a complete and mathematical valuation on the patents sold. It was almost impossible to do so and the Foundation was willing to become the trustee and to promote as well as defend the industry. At the outset, the Government paid $271,850. and 150 American firms provided $157,050. into the Foundation treasury. These firms were to use the patents, etc., as had been previously outlined. As to making money from the transaction, a statement from the Foundation shows that, basing the earnings of the corporation on the life of the patents and deducting interest and depreciation, there would be an annual deficit of about $12,000. Besides this, the Foundation has spent over $264,000 in educational work, including the publication of books of simplified chemistry, written by some of the best and ablest men in the United States. These publications (books, reprints, etc.) have been distributed to our professional men, to schools,

laboratories, etc., for the purpose of making the reading public familiar with the chemical industry.

When we stop to consider how exceedingly helpless the English-speaking people have been, and particularly those of the United States, with regard to organic chemicals, can we not realize that a golden opportunity is at hand! So utterly helpless were we when the war cut off European supplies of Phenol, no one could offer or suggest a way out. We were in honor bound to respect German processes patented. But Edison and his chemists elaborated a process of manufacture within a week. When the German U-boat arrived, loaded with dyes, "606," etc., we were thankful, but as helpless as before. The Declaration of War placed us on a different footing, gave the public a different temper; and, now, after years of patient submission to being robbed and held up by foreign manufacturers, we appear to be free of the "Old Man of the Sea." We are enjoying our liberty by having several firms manufacture "606" and "914" and many other synthetics.

Those Awful Patent Laws

Remember, the hateful patent laws can still be manipulated to our disadvantage and there are men lobbying in Washington today to place patents on a pre-war footing. About $300,000,000 has been invested in domestic dyestuff industry. There is a specific duty of 5 cents a pound on imported dyestuff and an *ad valorem* duty of 30%. This law was enacted in 1917 to last for 5 years and, if American manufacturers were not making 60% for home consumption, protection was to be removed. These conditions have been complied with and bright prospects are in store for the dye business under the new tariff.

Our stains and other synthetics are just as good as before, and the prices are reasonable. Do not let the siren song of cheapness and quality as before the war, lead us astray. Was phenacetine of years ago cheap at $1.00 per ounce, when it cost the Germans 15c per pound to make it? Pay no attention to German interests raising a howl about the Government selling the patents at too cheap a figure. Now we have those patents, let us hold them against all comers. Let us have a new slogan to replace "Made in Germany"—let it be "American Chemicals for Americans!"

Urological Anesthesia

FRENCH S. CARY, M.D., F.A.C.S., Chicago, Illinois.

THERE have been various kinds of local anesthetics used during the past few years in genitourinary work, many of which gave little if any anesthesia to the part applied. A local anesthetic which is to be used in the urethra or bladder must be one which acts quickly and has a low toxicity. For this reason, cocaine had to be discarded, on account of its high toxicity and the rapidity with which it is absorbed, thereby making it a very dangerous drug for the average patient whose tolerance for cocaine might be very slight. In cases where there may be strictures in the urethra, either anterior or posterior, it would be most dangerous to use a solution of cocaine in the urethra even as low as ¼ percent in strength.

Novocaine

Novocaine has been used and has proven more satisfactory than cocaine, inasmuch as it acts more quickly and does not possess the toxic qualities that the former drug does. However, the anesthesia produced is not as complete as it should be, and novocaine has to be used in 5-percent solution in order to produce sufficient anesthesia for comfort.

Alypin

Alypin has been used successfully, both in form of a small tablet which can be placed in the urethra by a special depositor, or in solution. The amount of anesthesia varies and, while complete in some cases, there seemed to be none at all in others. During the War, it was impossible to obtain this drug, and it is only lately that one could again buy the powder. The tablets which, in my opinion, gave the best results must be used with a special instrument for depositing them in the urethra.

Butyn

Early in 1922, butyn, a local anesthetic which had been used for ophthalmic work, was brought to my attention and I decided to give it a thorough test in genitourinary work. The powder is readily soluble in water and can be boiled without injury to the drug. I commenced with a solution of 1-percent strength and worked in series of twenty-five cases. In this series of cases, most of which required work in the anterior or posterior urethra, the solution was injected with a glass-rubber-bulb syringe of 10-Cc. capacity. The solution was held in the anterior urethra by compressing the

meatus for three minutes and, then, the solution was forced back into the posterior urethra with air from the bulb syringe. Five minutes was then allowed for absorption before work was begun. In all of these cases, there seemed to be only partial anesthesia and the duration was slight. I then started another series with a 2-percent solution, and found that, while the anesthetic was more complete and the duration of a longer period, there was still present some sense of pain. This series comprised cases for endoscopy and cystoscopy in which complete anesthesia of the posterior urethra is most necessary, especially in endoscopy.

A third series of cases was then started, using a 3-percent solution of Butyn. The same technic was employed in every case of each series, in order to check up the end results.

The 3-percent solution seemed to give complete anesthesia which was of such duration that the patient did not suffer any pain whatsoever. There was no toxic effect observed from absorption and, usually, the anesthetic effect lasted for some time after the treatment.

In bladder work, where operative procedure was necessary, I used a urethral catheter, into the end of which a small hypodermic needle had been connected and on the other end a fitting for a Luer syringe. This catheter can be used in an operating cystoscope and, in this way, any portion of the bladder wall may be injected with the solution of Butyn for anesthesia. This is especially valuable in operations around the ureteral orifice where one wants to incise the ureteral opening in order to permit the passage of a ureteral calculus. I have used Butyn, 1-percent in strength, in four of these cases with absolute, complete anesthesia of the part.

In cases of small middle-lobe prostates, where you desire to operate through the urethra either by means of Young's Punch, or by Caulk's Electro-Cautery Knife, a 1-percent solution of Butyn, injected into the prostate through an endoscopic tube, will give complete anesthesia in from five to seven minutes. The operation can then be done without pain to the patient. In female cases, the urethra is short and, after I inject the urethra with a bulb syringe, I insert a small applicator covered with cotton which has been soaked in a 3-percent solution of Butyn.

There are no after-effects from the use of Butyn and, after using it in over two hundred and fifty cases, I am convinced that it is the most desirable anesthetic for genitourinary work.

Conclusions.

1. More readily absorbed in the tissues than any previous local anesthetic.
2. Less toxicity.
3. Greater anesthesia to parts applied.

X-Ray and Clinical Findings in Normal Chests

(of children—6 to 10 years)

Medical Research, National Tuberculosis Association

SOME time ago, the National Tuberculosis Association began a new and important phase of its work in an attempt to increase the quantity and character of research work in problems related to its own field in the United States. For this purpose, it appropriated $20,000 and appointed a small committee composed of Dr. Wm. Charles White, Medical Director of the Tuberculosis League of Pittsburgh, Dr. Paul A. Lewis, Director of Laboratories of the Phipps Institute, Philadelphia, and Dr. Allen K. Krause, Director of Kenneth Dows Tuberculosis Research Fund, Johns Hopkins Hospital, to expend these funds to the greatest advantage.

This committee decided that the best use of these funds would be in assisting researches already under way and that held the greatest promise of increasing the practical knowledge of physicians dealing with tuberculosis. This, they considered, would bring the greatest help to those suffering from tuberculosis and the greatest boon to the public from whom the funds were collected. This plan has been carried out in cooperation with the universities.

One of the researches was an effort to establish the x-ray and clinical findings in the chest of a normal child up to ten years of age. For this problem, the National Tuberculosis Association nominated the following groups of roentgenologists and clinicians:

Dr. H. K. Pancoast and Dr. H. R. M. Landis, University of Pennsylvania; Dr. F. H. Baetjer and Dr. C. R. Austrian, of Johns Hopkins Uni-

versity; Dr. H. K. Dunham and Dr. K. D. Blackfan, University of Cincinnati.

The signed reports of these physicians are here presented in two sections with the hope that they may promote a discussion which will be fruitful in establishing the truth in these two fields.

Report of the Clinical Division of the Committee on Medical Research of the National Tuberculosis Association

The value of rœntgenography in determining the presence of pulmonary disease has long been recognized. Studies to determine the rœntgenograms of various pathological lesions of the lung have been almost without number; yet, much difference of opinion exists in the interpretation of findings, largely because no satisfactory observations have been made establishing the variations that may occur in the normal. To one observer, shadows noted are indicative of disease; to another, they are not evidence of a pathological process. To one, they represent lesions of clinical significance; to another, they suggest changes of no moment. The realization of this unsatisfactory state of affairs was widespread, but it remained for the Research Committee of the National Tuberculosis Association to consider it seriously and to set about to correct the shortcomings.

In the spring of 1921, that Committee called together the collaborators in this work and instructed them to set about in ways of their own choosing to solve the problem, extended to them a financial grant and, in order that the problem might be a very definite one, asked that the immediate study be limited to a consideration of the chests of normal children between the ages of 6 and 10 years. The work was begun promptly and a preliminary report was made at the annual meeting of the Association, in May, 1921. The findings at that time were incomplete and, because of the, then, limited observations, no very definite conclusions were drawn. However, the practical need of a solution of the problem was apparent. Study was continued throughout 1921 and the first four months of 1922, and the data independently assembled were jointly discussed in order to evaluate them. Although each pair of workers carried on its investigations without inter-group consultation, although each approached the subject from a different angle and, when first met, held views apparently not altogether in accord, it was agreeable to find that an exchange of conclusions disclosed almost an unanimity of opinion. The findings of these six observers — three clinicians and three rœntgenologists—are presented to you for your consideration:

Theoretically, the normal child is one of ideal height, weight and development for his age, without subjective or objective evidences of deformity or of disease and without residual changes due to antecedent pathological processes. Practically, a normal child is one of average height, weight and development for his age, symptom-free and without signs of disease. Each such individual, in more or less relation to his age, will have been ill more or less often and, as a consequence, may be expected to show variations from the ideal, not because of present disease, but as a result of residual changes that persist. An appreciation of these facts makes it apparent that the findings, clinical and rœntgenographic, in normal children as we meet them will vary greatly from any fixed standards and still must be considered as variants of normal.

The clinical data dealt with in this report were obtained by careful examination of apparently healthy children between the ages of 6 and 10 years. All children who showed signs of disease were excluded from the series. Individuals from various strata of society, foreign and native-born, residents of urban and of rural communities, school children and children residing in institutions, children exposed to tuberculosis and some without a history of such exposure, children with and without a history of previous infectious diseases, all symptom-free, and of an approximately normal height and weight for their ages, were studied. A history of each individual was recorded and, in making the examinations of the chest, care was always observed to have the child relaxed and to see that no cramped or unnatural posture was assumed; for, as is well known, faulty position may lead to findings that cause confusion in interpretation. In addition, a tuberculin test was made on every child. The clinical data were then assembled and, after the rœntgenologist had interpreted his plate independently, the clinical and rœntgenographic findings were correlated.

In all, over 500 children were thus studied and, as a result, some definite conclusions seem warranted.

As in the adult, so in the child, vocal fremitus is more marked over the right upper chest than over the left.

It is generally stated that the percussion note elicited over the lungs of normal children within the age limits under consideration, is fuller, more tympanitic, of higher pitch and

more resilient than that noted over those of adults, and that frequently the tympanitic quality is quite outspoken, especially over the lower lobe of the left lung. Although in general our observations confirmed this view, we have been impressed by the fact that, in an appreciable number of such children, the note obtained on percussion over the lungs is indistinguishable in quality from that elicited over the lungs of normal adults and that the usual resilience of the note is lacking. These findings in many instances have an analog in shadows noted in the x-ray films, shadows indicative of increased density along the bronchial tree, similar to those seen in the plates of normal adults. This correlation of the findings on physical examination and on x-ray study is more constantly possible in studies of the upper half of the chest. When minor changes, similar to those discovered by x-ray examination of the upper lobes, occur in the bases, they usually escape detection on physical examination. In those instances, in which no shadow is found to explain the deviation of the note from the generally accepted one, it is our belief that the lack of resilient quality may be due to a decreased elasticity of the chest wall.

The socalled tympanitic quality of the percussion note over the left base may be increased, decreased or be entirely lacking, depending upon the degree of distention of the stomach or colon, the curvature of the spine, and may likewise vary with the position of the diaphragm or with the posture of the child during the examination. The note over the upper thorax is often the same on the two sides. Krönig's Isthmus averages 5 to 6.5 cm. (2 to 2½ inches) in width. The lower margins of the lungs posteriorly are at the level of the 10th or 11th rib and descend from 1.5 to 3.5 cm. (⅗ to 1⅖ inches) during forced inspiration.

A just detectable diminution of resonance over the apical regions is of no significance unless associated with a modification of the breath sounds in those areas or with other abnormal auscultatory findings.

It is generally accepted that, normally, in childhood, the breath sounds have a harsh, sharp character, with expiration longer and better heard than in the normal adult. This socalled puerile breathing is physiological and, though it may seem trite, let it be emphasized that this exaggerated vesiculo-bronchial respiratory murmur, especially well heard in the areas overlying the great bronchi (i. e. anteriorly at the level of the first interspace and the second rib just lateral from the sternal margins, and posteriorly, particularly on the right side, at the level of the 2d to the 4th spine) is often incorrectly interpreted as evidence of pulmonary disease. An auscultatory finding that has not been pointed out or, at least, has not been emphasized, has come forcibly to our attention in carrying out this study. Just as the full, deep note or higher pitch characteristically elicited by percussion of the child's chest is often replaced in health by a note more like that produced when one percusses the normal chest of an adult, so, on auscultation of a child's normal lungs, the exaggerated, or puerile, breath sounds may be lacking and, instead, the socalled vesicular respiratory murmur characteristically present in adult life is heard. This finding, regarded by us as a physiological variation, has been noted as early as the age of four years and may perhaps occur in younger children. It is more readily appreciated and more often found than the variation in the percussion note just described. In more than 50% of the children in which this type of breathing was heard, examination with the x-ray gave findings like those obtained by a study of normal adult chests. In fact, the agreement of clinician and rœntgenologist was so constant that we have come, on the basis of these variations, to designate the chest of normal children as of "puerile" or of "adult" type. The essential fact to be stressed is, that socalled vesicular respiration is heard with great frequency in normal children and is to be regarded as a variation of normal and not necessarily as an indication of disease.

These variations and those of the percussion note are more generally found in children with a history of infections of the respiratory tract. No satisfactory explanation for this finding is offered. It may be due in part to altered resilience of the chest wall, a suggestion supported by the fact that, in some instances in which it was noted, diminished elasticity of the thoracic wall was apparent on percussion. It may stand in relation to variations of elasticity of the parenchyma of the lung. It may be due to a relative narrowing of the lumen of the bronchial tree. It is hardly to be considered evidence of increased density of respiratory tissue, for, theoretically, at least, that should lead to a modification towards bronchial breathing.

Concerning the whispered voice sounds, little comment needs to be made other than to emphasize their loud transmission, often with syllabation over the region of the major bronchi. Auscultation of these sounds over the upper thoracic spine of the children has led to the conclusion that D'Espine's sign as indicative of enlarged tracheo-bronchial lymph nodes

is, to say the least, of doubtful value. In 23 of the children, this sign was elicited without other signs of a mediastinal mass and without any corroborative evidence on x-ray examination. In 3, the sign could not be elicited, although from the x-ray plate it might have been inferred that it should be. Eustace-Smith's sign is so generally present in normal children that it is of little or no practical diagnostic worth. The presence of these two signs, together with impairment of resonance in the interscapular region, is all too frequently made the premises for a diagnosis of tuberculosis of tracheo-bronchial lymph nodes. This is unwarranted; for, as indicated, these signs are unreliable evidence of a pathological condition, and the determination of a diminution of resonance in the interscapular region requires such a nicety of technic that even masters of percussion disagree as to the presence or absence of significant findings in this region of the chest.

Increased Density

A year ago, in the preliminary communication to this Society, we stressed the importance of the role that antecedent infections might play in the production of areas of increased density within the respiratory tract (bronchial tree, parenchyma of the lungs, etc.). This fact is reemphasized, since further study has established the importance of it. Not only may recognized or remembered infections of the bronchi and lungs be responsible for alteration in these tissues, but other diseases, not ordinarily considered of significance in this regard, may be causal of such changes. For example, our observations indicate that, after measles, pertussis or tonsillar infections, areas of increased density radiating from the hilum into the bases, especially, occur with great frequency. Such lesions generally are not discoverable on physical examination and would be unsuspected but for the use of the x-ray. They are referred to in the clinical part of our joint report in order to point out the need of a careful history as well as examination in all individuals, before proceeding finally to interpret the findings of the rœntgenologist.

By way of digression, it may be interesting to point out the fact that, though measles and pertussis have been known to produce lesions in the upper air passages, involvement of the lower tract has been considered a complication and was thought to occur only when evidence of bronchitis or of broncho-pneumonia were discovered. Our observations indicate that there may be a mild inflammatory process throughout the respiratory passages in a large percentage of the socalled uncomplicated cases of these diseases. This suggestion warrants further study in relation not only to the infections under consideration but also other infectious diseases. That such shadows, mediastinal and basal, noted in children who give a history of uncomplicated measles and pertussis, are evidence of healed processes, is evidenced by the experience that similar shadows of like origin have remained unchanged and without the development of clinical symptoms in a series of children observed for from 3 to 5 years. Such changes must be properly evaluated as indices, not of present disease, but of lesions past and healed, not as warrant for the diagnosis of present illness and the institution of treatment, but as scars of infections met and overcome.

Most of the children included in this study were tested with tuberculin. Some were given a cutaneous test with old tuberculin (Pirquet); others were tested by the intracutaneous method (Craig).

The foregoing facts have been detailed at some length in order to establish the major thesis that, clinically, the ideal, normal child is a hypothetical impossibility. Children, apparently healthy, symptom-free and active, show on careful examination many deviations from fixed standards, variations that must be interpreted as within physiological limits; standards of height and weight must be elastic; measures of resonance and of resilience of the chest must not be rigid, and estimates of acoustic phenomena must permit of a range of difference from the ideal. Clinical experience establishes these facts beyond peradventure, and they suggest a corollary; namely, that x-ray examination of the chest of such children may be expected to show comparable deviations from a fixed ideal rœntgenogram.

Conclusions of the Internists

The studies reported, fortified by past experience, warrant the following conclusions:

1.—The data obtained on percussion and auscultation of the lungs of normal children show wide variations from a fixed standard. These variations are usual and are considered to be within normal limits.

2.—Inasmuch as the changes referred to are dependent often upon alterations that persist as the residua of past infections of the respiratory tract, it is obvious that a careful anamnesis, with special reference to all infections, is necessary if diagnostic errors are to be avoided. Even a history carefully taken is often unreliable, as minimal infections are soon forgotten by many and, among the unintelligent classes, even more significant indispositions

are not readily recalled.

3.—Failure properly to evaluate these deviations from a fixed standard will often lead to the unwarranted diagnosis of disease and to even less justifiable treatment.

4.—With a proper appreciation of the widest variations that the normal may present from the ideal, the informed clinician is better able correctly to understand the findings of the rœntgenologist; and each, cooperating with the other, is less liable to error.

5.—D'Espine's sign as indicative of enlarged tracheo-bronchial lymph nodes is of little value.

6.—Recognition of and familiarity with the foregoing data are of cardinal and practical importance to every patient, potential and established. Without a proper appreciation of the facts set forth, no intelligent differentiation between a normal and an abnormal respiratory tract can be made.

In brief, to establish the presence or absence of disease, it is imperative that all data—clinical, laboratory and rœntgenographic—must be evaluated and correlated and that no one fraction of the evidence be stressed to the exclusion of the others.

(Signed) C. R. Austrian,
H. R. M. Landis,
Kenneth D. Blackfan.

May 6, 1922.

Report of the X-Ray Division of the Committee on Medical Research of the National Tuberculosis Association

It is generally conceded that one of the most important factors in accurate interpretation of the appearance of morbid processes is the familiarity with the normal and variations therefrom within normal limits. With a full realization of this in view, the National Tuberculosis Association in 1921 appointed a committee comprising three rœntgenologists and three internists to make a study of the normal chest of the child between the ages of six and ten years. This group was instructed to work in cooperation and to make a report of their investigations before the Association when their studies were completed and their conclusions reached. The members selected for the committee were Dr. H. Kennon Dunham of Cincinnati, Dr. Frederick H. Baetjer of Baltimore and Dr. Henry K. Pancoast of Philadelphia to act in the capacity of rœntgenologists and to work in cooperation with the respective internists in the same cities, Dr. Kenneth Blackfan, Dr. Charles R. Austrian and Dr. H. R. M. Landis. Each group of two was to work independently until a satisfactory number of individuals were examined, and the entire committee was then to meet and draw their conclusions for presentation. It was to be the duty of the internist in each group by careful clinical study to select as nearly normal children as possible for examination by the rœntgenologist. The entire procedure was to be carried out with strict cooperation between the two members of each group.

It was soon realized by the x-ray members of the groups that an attempt to describe a normal chest was practically impossible. Their

X-ray and clinical findings in normal children

endeavors soon began to center around the description of a theoretical normal with wide variations that would serve as a basis for the interpretation of abnormal appearances and tend to preclude the possibility of erroneous diagnosis being based upon faulty interpretations of hilum shadows, trunk shadows and linear markings more or less altered in appearance by the frequent respiratory infections of children. They realized that herein had existed the greatest source of error in interpretation and, no doubt, the Association had this same thought in mind when the committee was appointed to take up these investigations. Errors in interpretation have been made chiefly in connection with the diagnosis of pulmonary tuberculosis.

It was the consensus of opinion that children are probably more apt to show definite x-ray

evidence in the hilum and trunk shadows of simple as well as serious respiratory infections than adults. Virtually all children of the ages of those examined have had at one time or another one or more respiratory infections, especially measles and whooping cough, that are likely to produce very apparent changes in the shadows mentioned and which will remain distinctly visible for a variable period of time. These apparent deviations from the normal are not necessarily abnormal when observed, but may be the harmless results of one or more infections. No doubt such appearances have many times been misinterpreted as evidences of tuberculosis. In the conclusions reached by the committee, the attempt has been made to preclude this possibility.

Many of the general observations made have not been included in the conclusions. One of those perhaps worth mentioning is the fact that the heart of the child is found to extend relatively further to the right than in the adult.

The thoroughness with which the studies were carried out may be in part realized from the number of individuals examined. Over five hundred children were selected from all strata of life, as stated in the clinical report of the committee.

The groups comprising the committee met at the Phipps Institute, Philadelphia, March 3, 1922. Prior to this meeting, there were misgivings as to the possibility of an agreement upon any very definite conclusions, but much to the satisfaction of all the members a definite agreement was reached and the conclusions were completed after a few hours' careful deliberation.

To assist in a better understanding of the conclusions of the committee, a composite diagrammatic reproduction of several rœntgenograms was made and is shown in the accompanying illustration. It must be remembered that the three zones of the chest have thickness as well as length and breadth. Thus the zones extend anteriorly and posteriorly from the lung root as well as laterally.

Conclusions of the X-Ray Division of the Committee

The Normal Chest.—The normal chest of the child from the rœntgenologic standpoint is subject to such wide variations within normal limits as to be beyond the possibility of exact description.

Hilum Shadow.—The conglomerate shadow commonly called the hilum shadow, when found lying entirely within the inner third or zone of the lung area can be disregarded, (or regarded as normal) except where it is made up of a solid mass of homogeneous shadow giving undoubted evidence that it represents a growth or mediastinal pleurisy.

Calcified Nodes.—Calcified nodes at the root of the lung, without evidence of lung disease, are of no significance except as a possible evidence of some healed inflammatory condition, possibly but not necessarily tuberculous. They are a common finding in normal chests.

Density and Thickness of Trunk Shadows.—In the normal lung, the bronchial trunk shadows are not visible in the extreme apical regions. For convenience of description, the remainder of the lung is divided into three vertical zones, extending outward from the lateral border of the spinal shadow to the lateral chest border.

The inner zone contains the root shadows.

The mid zone contains the trunk shadows, gradually fading out into their final subdivisions.

The peripheral zone contains radiating lines from these and fading off before the periphery is reached.

Where in the mid zone or peripheral zone, these shadows do not disappear in the characteristic fashion described, the appearance may be evidence of a variety of conditions, past or present, of an inflammatory nature or otherwise. It may accompany a tuberculous process but is not necessarily indicative of tuberculosis.

Improper or Misleading Terms.—The use of the terms "peribronchial tuberculosis" and "parenchyma tuberculosis" are not to be recommended in the interpretation of rœntgenograms of the chest. Until corroborated by laboratory or clinical findings, the use of the terms "active" and "quiescent" should not be definitely applied to evident lesions demonstrated on plates.

(Signed) Henry K. Pancoast,
Kennon Dunham,
F. H. Baetjer.

May 6, 1922.

The Indications for Hydrastis Canadensis

By J. M. FRENCH, M. D., Milford, Massachusetts

I HAVE used Hydrastis Canadensis, or Golden Seal, its alkaloids and preparations, ever since I began to practice medicine; and that was quite a number of years ago. And I think that, outside of the half dozen or so standard remedies without which we could not practice medicine, I never found any drug that gave me more satisfactory results and fewer failures than golden seal. It is a remedy for conditions rather than diseases; it is uniformly helpful in a large class of cases, and it has never done my patients harm. Now, this is high praise for any drug; and if, when I have finished this paper, I have said nothing to dull its sharp edge, I shall have said something worth saying.

I got my first knowledge of hydrastis from Eclectic and botanic sources, and much of it from Scudder's "Specific Medication", a book with which I became quite familiar in the days when I was studying medicine and from which I learned many lessons of value, of which I still make use. I have used the root only a little; the fluid-extract not much more; Lloyd's Fluid Hydrastis to a considerable extent, and the alkaloids hydrastine and berberine, with the concentration hydrastin, a good deal. In the days of my first knowledge of it, it was a very cheap drug. No longer ago than 1895, according to the *Oil, Paint, and Drug Reporter*, the price of the dried root varied from 17 to 23 cents a pound; in 1905, from $1.20 to $1.65; while, today, my druggist assures me that the price is $9.00 per pound. In the early days, it was known as a botanic remedy and was not held in very high repute by the "regular" profession, until it was rescued from its obscurity by Roberts Bartholow, whose investigations gave it so high a standing and made it so much sought after that its price went soaring heavenward, like the cost of living during the World War. But, golden seal was just as good a remedy before Bartholow investigated it and gave it the benefit of his endorsement as afterwards, and there were plenty of "root and herb" men who knew how to use it and get results.

John Uri Lloyd (in his *Bulletin of the Lloyd Library*, No. 12, devoted to "The Eclectic Alkaloids, Resins, Resinoids, Oleo-Resins and Concentrated Principles,") says: "Only five North-American plants established in therapy yield alkaloids in any considerable amount, viz., Sanguinaria, Hydrastis, Gelsemium, Veratrum, and Lobelia. Of these, the alkaloids of two only, the old Eclectic Sanguinaria and Hydrastis, have ever been much valued in medicine, and these, it is now known, but imperfectly represent the drugs yielding them. All the American alkaloids now employed to any extent were introduced into Eclecticism in the first half of the nineteenth century."

The Alkaloids of Hydrastis

There are two principal alkaloids of golden seal, namely, hydrastine and berberine, called by the Eclectics "the white alkaloid hydrastine" and "the yellow alkaloid hydrastine." In addition to these, there is a third alkaloid, known as canadine, or sometimes as xanthopuccine. There is also an artificial alkaloid derived from hydrastine by a process of oxidation and known as hydrastinine.

Indications for Hydrastis

Hydrastis canadensis is a remedy, primarily, for relaxed and diseased conditions of mucous membrane. It is especially valued for its effects on the gastrointestinal mucous membrane. Its action is that of a tonic, improving the appetite, relieving irritation, and facilitating digestion by increasing the flow of the digestive secretions. For these purposes, any of the Galenic preparations may be used, such as the dried or powdered root, fluid-extract or tincture. There is a reliable line of preparations put out by the Eclectic pharmacists, of which the Specific Medicine and the normal tincture are standard. Lloyd's Fluid Hydrastis is an excellent preparation containing all the medicinal principles in aqueous solution and in the normal quantities. This is largely used by physicians of all schools.

Berberine and Hydrastine

The yellow alkaloid, *berberine,* is the most abundant of all the active principles in golden seal, existing in the root in the proportion of from one to three percent. It is found in a large number of plants besides hydrastis and is said to be the most widely distributed alkaloid known in the plant world. It occurs in yellow needles, and its solutions are of a yellow color and an extremely bitter taste. Its salts are of a golden yellow color and are more soluble than the alkaloid. The salts most commonly used in medicine are the sulphate and the hydrochloride.

In large doses, its most important action is upon the central nervous system, paralyzing first the automatic centers, and afterwards the

spinal cord. *When given in medicinal doses, the characteristic action of berberine is, to produce contraction of abnormally relaxed muscular and connective tissue.* Its most important internal uses may be arranged under three heads:

1.—As a simple bitter, whenever there is loss of appetite, lack of tonicity, relaxation of tissue, and deficient secretion of digestive fluids.

2.—In catarrhal conditions of mucous membranes, characterized by relaxation and oversecretion.

3.—In enlargement of the spleen, subinvolution of the uterus, dilatation of the heart, and other similar conditions.

As a general tonic, berberine is best given in small doses frequently repeated. The dosimetric physician uses it in granules of 1/67 and 1/6 grain, or equivalent amounts in solution, given three times a day after meals, as a stomachic tonic, or every one or two hours where it is desired to saturate the system with it speedily. In therapeutic doses, no poisonous results have been known in man. I have often had most excellent results in conditions of slight nausea, loss of appetite and general relaxation, by dissolving a half dozen of the smaller size of these granules in two ounces of water, and having the patient take a teaspoonful every hour during the day. This is one of my favorite methods of using the drug.

The white alkaloid, *hydrastine*, is found in golden-seal root in much smaller proportion than the yellow alkaloid, berberine, usually varying from ¼ to ½ of one percent. It is, however, much more powerful in its action. In physiological doses, it acts upon the medullary centers and the spinal cord, first as a stimulant, and then as a paralyzant. Its *fundamental action in therapeutic doses consists in producing contraction of the capillaries and minute arterioles, with an especial tendency to the urinary tract.*

1.—Its specific use as indicated by this action is in capillary hemorrhages of all kinds.

2.—As it has an especial tendency to act on the genitourinary organs, it is of special value in uterine hemorrhages.

3.—It is also of value in catarrhal conditions of the mucous membranes wherever situated.

It will be readily seen that the actions of the two alkaloids, hydrastine and berberine, fit in with and strengthen each other, and that the two, combined in proper proportions in one plant, make a strong combination.

The toxic action of hydrastine is much greater than that of berberine, but this disadvantage is overcome by the fact that it occurs in much smaller quantity in the plant in which the two are found in combination.

On the other hand, the two alkaloids have each their separate action, and can be used in such amounts as may be best adapted to procuring the results desired. Berberine will find a more frequent use, but hydrastine will produce more evident and positive results.

Hydrastine is comparable to strychnine in its toxic action on the central nervous system, and to the alkaloids of sanguinaria in its weakening and finally destructive influence on the muscles, especially those of the heart. It stimulates the inhibitory nerves, slows the pulse, and raises the arterial tension. Bartholow considers that hydrastine is the true active principle of golden seal; while the Eclectics claim that berberine (yellow alkaloid hydrastine) is the characteristic principle.

Less Important Alkaloids

There is a third natural alkaloid of golden seal, known as *canadine*, or sometimes as *xanthopuccine*. It is found in the plant only in very minute proportions. It has not been made use of in medicine to any considerable extent, nor has its action been studied with the same care as the other alkaloids. In small doses, it is said to produce drowsiness, and in large doses it causes a stage of excitement followed by depression and paralysis of the central nervous system, with cardiac arythmia and weakness.

Hydrastinine, a fourth alkaloid of hydrastis, is an artificial alkaloid, derived from hydrastine by a process of oxidation. Physiologically, it is a powerful depressant of the whole motor tract, with a stimulant action on the circulation, slowing the heart, contracting the blood-vessels, and producing a marked rise in arterial tension throughout the entire body. Therapeutically, its primary use is as a uterine hemostatic and vasoconstrictor. Its specific use, therefore, is in restraining uterine hemorrhage. It does not cause the painful contractions of ergot, since it acts only on the vessels, not on the muscular fibers. The dose in case of serious hemorrhage is from ½ to 1½ grains a day, in divided doses. It has been used with good effects in hemoptysis.

Lloyd says: "The substance known for over fifty years as Hydrastine Principles Combined was the first resinoid of this drug. It carries much foreign material, such as the acrid resin and other proximate principles of hydrastis canadensis. As a remedy for internal administration, where it is not necessary to employ a solution, we consider the 'Principles Combined' as preferable to any single alkaloidal salt

of the drug. We consider the white alkaloid (Hydrastine, so called) too violent to dominate any hydrastis preparation and, for this reason, we exclude it largely from our 'Principles Combined.'"

We understand that this preparation, "principles combined," corresponds very nearly with the concentration listed as hydrastoid by Abbott.

Of the fluid preparations, Lloyd's Fluid Hydrastis is one of the best, containing as it does, all of the medicinal principles of the plant, with all the dirt and extraneous matter excluded, the whole in aqueous solution. This is lauded by the Eclectics as a local application in leucorrhea and gonorrhea, ¼ dram to the ounce of water. In stomatitis and other forms of sore mouth, it is also an excellent application; or a decoction of the root or a dilution of the fluid extract may be used.

Some Favorite Prescriptions

Based on the physiological application, an ideal remedy for enlarged spleen from malaria is found in the combination of quinine and berberine, according to the following formula:

℞ Berberine hydrochloride 15 grains.
Quinine bisulphate 7 grains. Mix.
Put up in four capsules.
Sig. Take one every hour. For an adult.

Most medical men are apt to have a few favorite prescriptions, either original with themselves or copied from some source in which they had confidence, and found by experience to be worthy of that confidence. These they use with success and satisfaction for many years. After a time, however, the rule is that, as the fashions in medicine change, these favorite prescriptions are laid aside or forgotten, their places being taken by some more modern or more pleasant or, at least, more up-to-date, even though not more successful prescription. Very few such combinations are used for twenty years, even by the men who originated them, unless, indeed, they are commercialized and used for the money that can be made from them. Such a prescription was Greene's Nervura, which had a great run, not so many years ago. They tell a story up in New Hampshire about a neighbor of one of the proprietors who, when riding to Boston with him one day, became somewhat confidential and ventured to ask him: "Now, Dr. Greene, tell me truly, is Greene's Nervura really a good thing?" To which Dr. Greene smilingly replied, "Well, it's been a mighty good thing for the Greene family."

What I am coming at is, to tell you of a combination which I concocted in the early years of my practice, and which has lived through forty years of professional life and still stands as high in my estimation as ever. Perhaps, if I were starting anew, I might change the combination slightly, but it is good enough to recommend and to use as it is. This is the formula:

Berberine Tonic:

℞ Strychnine sulphate 1 grain.
Berberine hydrochloride 1 dram.
Conc. tincture iris 1 ounce.
Elixir Calisaya to make ½ pint. Mix.
Sig. Dose, one teaspoonful before each meal. May be taken either clear or with water, as preferred.

I have found this a valuable remedy for a large class of digestive derangements. It is a genuine tonic for the stomach. Its indications are the indications for hydrastis as already given, "improving the appetite, relieving irritation, and facilitating digestion by increasing the flow of the digestive secretions." See also the first indication under berberine. I recommend that you try it and see for yourselves.

Chorus: *Make we mery, both more and lasse,*
For now ys the tyme of Crystymas!

Let no man cum into this hall,
Grome, page, nor yet marshal,
But that sum sport he bryng withall,
For now ys the tyme of Crystymas.
Make we mery, etc.

Yffe that he say he can not syng,
Sum oder sport then lett hym bryng,
That yt may please at thys festyng,
For now ys the tyme of Crystymas.
Make we mery, etc.

Yffe ye say he can nowght do,
Then, for my love, aske hym no mo,
But to the stokke then lett hym go,
For now ys the tyme of Crystymas.
Make we mery, etc.

—Old Tudor Song, about A. D. 1500.

The Influence of Parenteral Administration of Protein Substances on "Non-Specific" Immunity

By EDWARD AHLSWEDE, M. D., Hamburg, Germany

EDITORIAL COMMENT.—The problem of non-specific protein sensitization has recently come very much into the foreground of studies tending to elucidate the origin and nature of immunity. The old viewpoint of a strictly specific immunity is being abandoned and our opinions regarding the mechanism through which immunity is established are becoming less complicated, because simplified.

The article presented herewith deals, in a general way, with this subject. It will be followed by a number of others in which the utilization of non-specific immunization in the less complicated, because simplified.

THE investigations of Much in particular, as well as of others, have shown that specific immunity is really only a branch of nonspecific immunity. This is best explained by the experiences had with the practical administration of antitoxins. Thus, in the treatment of diphtheria, e.g., it has been possible to attain the same favorable therapeutical effect with injections of pure equine serum as with diphtheria serum. Much, therefore, holds that, with the aid of *non-specific* agents, the *specific* immunity can itself be produced and increased. The idea that the human system responds to invading toxins by developing exactly corresponding antitoxins is consequently being gradually given up. Practically all biological experiments along these lines tend to support this change of view. Every cell of a completely developed body produces certain substances which are important and necessary for a harmonious cooperation of all organs. A cell cannot, therefore, normally by itself produce new substances. On the other hand, it is very probable that certain cell products must exist which possess an increased damaging effect on certain bacteria, or on the toxins produced by them. Thus, if the body cells in general are stimulated to increased activity, these "specific" substances are naturally also produced on a larger scale.

As this must convey the impression that the body develops individual antitoxins, future investigations will have to decide whether or not certain systems in the organism can be stimulated individually to increased activity. On the other hand, it is not difficult to demonstrate the difference between the active function of body cells and the neutralization of certain toxins by antitoxins. Much, e.g., showed how very small the quantity of toxin is which a serum containing an antitoxin actually binds in a test tube, compared with the large quantities of toxin which the human body can neutralize. The fact that the increased protoplasmic activity of *all* body cells frequently suffices to successfully combat the invading bacteria and their toxins *without* producing specific antitoxins can be judged, e.g., from the continuous attacks the system is exposed to by ordinary pus-cocci (staphylo- and streptococci). Much holds that the typhoid, influenza and streptococcal infections are chiefly combated by the *"non-specific"* forces of the body, and therefore sees in the development of specific reactive bodies only a concomitant effect or, rather an after-effect of the general "activation of the cell protoplasm" (*Protoplasmaaktivierung*).

This general activation of the protoplasm can be partly attained in *acute* infectious diseases by ordinary therapeutic measures. Thus, actinotherapy, all forms of hydrotherapy, also massage, electricity, etc., owe their effect to the stimulation of the cell protoplasm which they provoke. Even the effect of psychotherapy is explained by Much in this sense. Now, in practice, the strongest agents for attaining a general activation of the protoplasm have proved to be the various kinds of proteins injected parenterally (para-enteron, i.e., intramuscularly or intravenously — *Not, per os*). Of these, blood, serum, tissue extracts and tissue emulsions were the first used for the purpose. However, they have recently generally proved less effective than the proteins obtained from milk and are, therefore, being generally replaced by these.

The investigations of Hiess and Hirschenhauer along these lines, especially with regard to septic infections, such as puerperal fever, are interesting. The attempts to destroy strepto- and staphylococci circulating in the blood by injections of solutions containing colloidal silver are common knowledge and have long

passed the experimental stage. While the therapeutic success was doubtful, as only very slight cases of initial sepsis responded to injections of this kind, there was in advanced stages of sepsis no success at all to be noted. The effect of the silver salts cannot, therefore, be ascribed to a direct destruction of the germs in the blood, but must rather be understood as a kind of stimulation of the protoplasm, the principal effect being due not to the silver but to the albumin-colloid. In the last two years, particularly, attempts were therefore made to support the defensive action of the body against invading bacteria and their toxins in general by injections of the proteins contained in milk. A germ-free and toxin-free milk albumin solution as well as a 5 percent sterile casein solution obtained from milk proved therapeutically so effective that they now deservedly dominate "non-specific" immune treatment. Thus, Hiess and Hirschenhauer report better results with casein injections in the treatment of puerperal fever than with collargol injections. In case of too strong reactions with casein, as in some debilitated patients, the milk-albumin solution will be the next best equally effective agent. It is understood that the ordinary physical measures should be applied simultaneously. Thus, diathermy and stagnation treatment encourage a quicker reaction of the body to protein injections. A combination of diathermy treatment with non-specific milk-protein injections is, therefore, in our experience, perhaps the most effective means of stimulating the defensive action of the body to its maximum.

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Memoirs of the World War

By GUSTAVUS M. BLECH, M. D., Chicago, Illinois

[*Continued from November issue, p. 824.*]

The Camp Hospital Becomes a Base Hospital

SUPPLIES were coming in daily. I asked for several hundred beds and they came. Drugs, dressings, and instruments, kitchenware, field stoves came by freight. Several trucks and a Ford delivery wagon, two motorcycles with side cars were sent us overland. I had promise of an x-ray apparatus and of a bacteriologic laboratory on a large scale. Even a laboratory specialist was sent for duty. I had but to write and the rest was easy. But, the thing I wanted most was, a new title for the hospital.

A camp hospital in the A. E. F. meant a hospital of variable size, primarily intended to afford hospital care to garrisons of a certain district in the service of supply. Autun had but one military post for the training of military police with a rapidly changing population, fluctuating from five hundred to two thousand officers and men.

The signal detachment had one officer and ten men; the ordinance detachment about a like number. For such a small garrison, my hospital was 'way too big. Besides, our scope was larger; for, we actually acted as a base hospital, as we had most of our patients sent in from the front.

The status of a base hospital is far better than that of a camp hospital. As commander of a base hospital, I would be post commander, subject to Colonel Ruffner only in matters of discipline and supply, but otherwise responsible only to the Chief Surgeon of the A. E. F. A base hospital was entitled to civilian laborers and, as the cold season was approaching and stoves were already requisitioned, I would need male help to saw wood (of which I had many car loads in my backyard), to make fires, etc. I wrote General McCaw a personal letter, pointing out that, in spite of the unfavorable location of the hospital from the standpoint of communication, it could be made a valuable institution, and, if the proper class of patients were to be sent us, we could "salvage" very many for the army. I heard nothing in reply.

About a week later, a French soldier came to the hospital and importuned me to send a physician to save his sister's life. We were all very busy, but the soldier had the *Croix de Guerre* with palm, and I could not refuse him. I jumped into the Ford machine and went to his house. When I returned a half hour later, my adjutant excitedly told me that the chief surgeon and a colonel were here on an inspection tour.

"Where are they?" I exclaimed.

"In the garden. They wanted to see the ground on which you plan to pitch the large ward tents."

I went out at once. General McCaw and Colonel Fife went over the hospital with me. I was told to make written application to have

the hospital designated a base hospital. The two distinguished officers left.

When I entered the mess hall, the officers had half finished their dinner.

"Gentlemen," I announced, "I think I can say that, very shortly, you will have the honor of being charter members of a base hospital." It was a happy, noisy, boisterous evening. The application was favorably acted upon. Camp Hospital 47 ceased to exist and, instead, arose U. S. Army Base Hospital 208. The next day

after receipt of the order, some of the patients tacked a newly painted sign over the front gate of the hospital. At about the same time, my name, I was informed, was sent in to headquarters for promotion.

The day the Ottoman Empire sued for peace, we returned to the front forty-six men, the first group, which was followed by similar groups in quick succession. The men were paid off in the afternoon and, at 5:00 o'clock, assembled in the yard. Roll call followed. The adjutant handed the ranking soldier the travel order for the group and the railroad travel certificate.

The cook rushed up with a large basket and distributed sandwiches, fruit, etc. A few words of admonition by me, then the detachment was turned over to the soldier-in-charge. He saluted smartly.

"Squads right—march!"

The men stepped off briskly and passed through the gate. As I entered the office to resume my work, the thought came to me that this was the first real service I had rendered "to help win the war."

The Armistice

The news that the armistice was an accomplished fact reached me by wire. Autun was celebrating. Every house was flagged. In the evening, rows of little burning torches were placed in front of houses. The windows were illuminated. French officers were seen in the drinking places celebrating. American soldiers followed suit. I took a walk through the town to see whether our men were behaving. Then I returned to my room. I rang for the orderly and sent for toast and coffee. I ate slowly—with my mind thousands of miles away. The pipe was lighted—it felt so good to stretch out on the chair.

The war is over - - - America won the war - - -. How they jubilate in Chicago now - - what tears they shed for the living, for the dead. - - Oh - - home - - home - - with its rows of books—with the huge arm chair—and the steaming coffee on the table and the late-edition daily newspaper every day on time—home.

The eyes became heavy, uncontrollably heavy. I descended the stairs to my room. On the table, is a large bouquet of flowers—French women workers of the hospital greet the American Commandant.

The very next morning, it was very palpable that there was a spirit of lassitude among enlisted men, nurses, and staff. Whether some sort of social affair in town, which had been attended by most nurses and officers, or whether the change in the political aspect of the war was the direct cause, I could not tell.

At the noon meeting, to which also the nurses had been asked, I informed them that:

Firstly, the war was not over as far as the medical service is concerned,

Secondly, irrespective of the future status of the war at the front, we are expected to do our full duty to the very last minute, and,

Thirdly, because of the armistice, I would tighten discipline.

The men were told the same thing in a somewhat different form, about two hours later.

During the afternoon, my two old friends, whom I had asked to be transferred to my outfit, walked into my office. Both seemed glad to see a place with a roof on.

Sergeant Ernest A. Anderson (formerly my first sergeant of the field hospital) was

assigned to duty as medical supply officer; and I immediately recommended him for appointment as a second lieutenant in the sanitary corps. Private, 1st Class, Peter G. Hepp (formerly my orderly) was given two jobs. He brought with him two bugles at my request, and he was to sound the calls and instruct two men as buglers. I recommended him for promotion to the grade of sergeant and placed him in charge of the patients' mess. Hepp did more than that. He at once rigged up a flag pole and, now, we could add the full ceremonies of reveille and retreat to our daily military program.

The Matter of Promotions

I do not recall the exact day, but, very soon after the armistice, we began to hear rumors that there would be no further promotions. This was confirmed. The Chief Surgeon's office wrote a letter of regret not to be able to recommend Anderson for a commission, on that very ground. This edict resulted in consternation and a state of depression which, I think, has done more harm to the army as an efficient organization than anything I can think of.

There were men, several in my own little command, who had worked very hard and who either had or should have been recommended for promotion; but, due to no fault of their own, the whole system of promotion being chaotic, they were now told that they must go back to their families and friends with the same rank they had when they left for war service in France.

Had the war continued another few months, all these men would have been promoted, since no recommendation of a commanding officer was ever turned down. But, now, the heroic effort of our army which hastened peace was the very cause of its own undoing. Wherever one went, whatever officer (except the generals and colonels who had attained all the rank they possibly could) one talked with, one heard the same bitterness which, translated into plain English, amounted to: "Oh, what's the use!" The Government is long on promises, but short on rewards.

It was rumored, however, that General Pershing was keeping the wires hot sending psychic artillery shots to Washington. And this must have been so, for, eventually, early in 1919, the Army, being at last recognized as a living organism, came into its own again. We all got promotions; that is to say, those who had been recommended. However, meanwhile, a large number of officers had gotten out of the service.

Usually, to get out of the army is not a simple matter. One had to show distress at home and, unless this was of a character that could be remedied by the presence of the officer at home, no discharges were granted. But, when otherwise excellent men do their work automatically, without spirit or initiative, and make every neighbor's life miserable by continually bemoaning their fate which did not bring them the desired honors, such men become a nuisance. In such cases, a confidential report to headquarters resulted in the man being ordered home for discharge or transfer to some other station.

However, we had very little to suffer on that score. Usually, a word of encouragement, an appeal for patience brought about the desired result and, thus, our Thanksgiving dinner was as fine an affair as I ever attended.

All patients not confined to bed had a special menu of turkey. The entire detachment sat down to a Lucullan feast, which I was "officially" invited to inspect by the mess sergeant. It was palpable that Hepp was no longer satisfied to be a sergeant, but wanted the additional chevrons of a sergeant, first class.

As for the officers, we had with us, as guest of honor, the French head surgeon of Autun and, after the demi-tasse for him and the American coffee for the officers and nurses, the occasion was celebrated by a toast for the continued friendship of the French and American nations, to which the guest of honor replied feelingly.

The Work Slackens

Early in December, it became evident that peace would be durable. But, the position of my hospital was such that it could build on a reasonable amount of new patients only under battle conditions. We had sent away a good many patients, the work became mere routine; whatever operations were performed were for injuries and diseases such as one encounters in civil communities.

Now it was my turn to "mope." I had plenty to do in the office, but the fact that my doctors were not busy preyed on my mind. Of course, I did not allow them to fall into a rut. We continued our program as if nothing had occurred, although, with the last of the pneumonia patients (except one) convalescing, the internists, too, had but an hour's work in the wards.

I recollected how miserable I was in Mars with so little to do; so, I planned all sorts of enterprises of a pleasant character. I arranged for small excursions in the vicinity of Autun, short practice marches; and these measures

relieved the tedium somewhat. Finally, I took a desperate step. I wrote Colonel Fife a letter complaining about the situation. He wrote in reply, to sit still for a while, that plans were being worked out for us to relieve another hospital, which had been in service for some time; in the mean time, to hold on to what we had got.

After reading that letter, I was myself again, and I succeeded in infusing something like cheer into the hearts of my associates through an announcement that we would soon be given a larger field.

The Hospital Is Demobilized

A few days later, orders came to demobilize the hospital. This was no easy task. The huge equipment had to be sent to a supply depot by freight. There were difficulties in securing the required amount of freight cars. We shipped the non-essentials first. Then followed all surplus stock. X-ray equipment and bacteriologic laboratory equipment were crated. All this required a good deal of toil. Trucks after trucks were being loaded, taken to the freight yard, unloaded and put into the cars. There had to be careful checking. When a car was sealed, our responsibility ceased.

Finally, the order came to send all patients to a neighboring center. I called up the headquarters of that center, and they offered to let me have some ambulances. I answered that I would call for them in the morning. That evening, an evacuation ambulance company passed through Autun on the way to Dijon. They asked permission to park the ambulances in our courtyard and to remain over night for shelter. The commanding officer told me that his men had recently arrived from the United States and felt discouraged because they would have nothing to do.

"I'll give them a job right away," I replied, "if you make a detour of a few miles, you can transport a convoy of patients when you leave in the morning." This was accepted. Early the next morning, the patients were loaded on the ambulances, and taken to the center. Only a few patients remained. One patient suffering from pneumonia was very ill, and I would not move him, even if I had to leave personnel behind; a few others would be in a condition to be moved in a few days. A day later, the pneumonia patient died. The remaining few recovered and were sent to their garrison. The hospital was now empty. The last beds and equipment were shipped away, only sufficient material was left for the detachment.

Christmas was a rather cheerless affair. The nurses decorated the dining room, each officer received a small toy; a few gifts were exchanged. The packages from home brought a sort of joy mixed with melancholy. After dinner, I put on my overcoat and went into the hills. I did not return until midnight.

A few days later, telegraphic orders reached me. We were to go to Bordeaux, to "relieve the original personnel of Base Hospital No. 6."

On December 31, at 6:00 p. m., our little family was ready to proceed. Early in the morning, the last baggage was sent away. Officers and nurses took the noon-day and evening meals in a hotel. The building was turned over to the French authorities at 4:30 in the afternoon.

An orderly locked up my typewriter and took it away. I placed the necessary papers in my carrying case. In the courtyard, the men formed and marched to the depot in military formation.

Slowly I left the place which had meant so much to me, and went to the hotel for dinner. At 5:50, the command entrained.

[*To be continued.*]

Diabetes in the Negro

With Report of Eight Cases

By HYMAN I. GOLDSTEIN, M. D., Camden, New Jersey

Assistant Visiting Physician and Chief of the Medical Clinic, Northwestern General Hospital, Philadelphia; Assistant Visiting Physician, Philadelphia General Hospital; Assistant In Medicine, Post-Graduate School of Medicine, University of Pennsylvania, Philadelphia.

IT HAS been thought very commonly that diabetes in the Negro is quite unusual. While diabetes has not been so common, comparatively, among colored people as among the white population, it nevertheless is met with more often than one is led to believe from a careful review of the available literature on the subject. One would expect to find syphilitic pancreatitis more commonly among the colored patients, because of the greater frequency of positive blood Wassermann reactions among them. While it is true, however, that syphilis

is quite prevalent among the colored, diabetes is certainly not common. In a series of about sixty five (65) cases of diabetes mellitus (43 hospital cases and 22 dispensary cases in the Polyclinic Hospital), whose records were reviewed, eight (8) cases occurred among the colored patients. Of these 6 were females and 2 were males. Only in one of these cases in which blood Wassermann tests were made was the reaction positive. This certainly is most unexpected, in view of what Warthin believes to be the case. If syphilis were such a very important factor in the causation of diabetes, we should have many more diabetics both among the colored and the white population, and particularly among Negro patients that come to our clinics.

One of the patients (Felix S.), case 4, reported in my series, after a brief stay at the Polyclinic Hospital, was later admitted to the Philadelphia General Hospital, suffering from diabetic coma. This patient gave a four-plus Wassermann reaction. He had over 500 mgm. of sugar in 100Cc. of blood. At autopsy, the pancreas showed evidence of fibrosis. The autopsy notes will be included with the case report.

Warthin (Amer. Jour. Med. Sc., August 1916, page 157) concludes that latent syphilis is the chief factor in the production of the form of pancreatitis most frequently associated with diabetes, but that diabetes is not always coincident with severe degrees of this type of pancreatitis.

Lemann (Amer. Jour. Med. Sc., August 1921, p. 226) does not believe that syphilitic pancreatitis is the common cause of diabetes mellitus. He states that, while this disease is not rare in the Negro, still the incidence is not as great among them as among the whites. He concludes that there is no relation between the incidence of diabetes mellitus and syphilis and that there is an unexplained immunity of the Negro race to the production of spirochetal pancreatitis just as the race enjoys an unexplained immunity to the production of locomotor ataxia.

Lemann (*Southern Med. Jour.*, July, 1921, p. 522) disagrees with Warthin on the relationship of syphilis to diabetes. He based his studies on cases admitted to the Charity Hospital, New Orleans, where he found diabetes less common among the Negroes than among the whites, although syphilis was more prevalent among the Negro population.

Dr. Pancoast (February 1898) at the request of Dr. Osler, reported a case of diabetes in a colored man, aged 50 years, before the Johns Hopkins Hospital Society. This patient had signs of tabes dorsalis and pulmonary tuberculosis. Dr. Futcher stated that diabetes is a rare disease in the colored race. Of 69 cases of diabetes observed in the Johns Hopkins Hospital, up to May 1897, there had been 5 in the colored race, or a percentage of 7.2. Of the 6 cases (including Pancoast's case), 4 were in women and 2 were in men.

In children, girls have diabetes more frequently than boys; in the adults (white) the ratio of the male to the female cases is about 3 to 2.

In presenting his case, Pancoast said that "diabetes in the Negro is rather rare". The patient's blood and urine gave the Bremer (St. Louis) reactions for diabetes.

Lemann (1921) remarks, however, that "it was formerly thought that diabetes mellitus was relatively rare in the Negro. While this disease is not rare in the Negro, still the incidence is not as great among them as among the whites."

At the Charity Hospital, New Orleans, during a period of twelve years (1898-1909), there were 45 white diabetics and 19 Negro diabetics in 61,298 admissions. The Negroes furnished 40 percent of the admissions and only 30 percent of the diabetics. The total incidence was 0.63 per 1000. The incidence among the whites was 0.72 per 1000, while among the Negroes it was only 0.47 per 1000. During 1910-1919, in 160,-044 admissions, there were 135 white diabetics and 59 Negro diabetics. The Negroes furnished 43 percent of the admissions and only 30 percent of the diabetics.

Krishnamurti Aiyer, in his paper on "Diabetes in Madras" (*Indian Med. Gazette*, November 1919, pages 410-411) states that the disease was rare among the Brahmins of the Madras Presidency a few generations ago and that it is even now rare among the women and more so among the widows. He then explains the reasons for these differences.

Alfred C. Reed, in his paper on "Diabetes in China", concludes that the disease is less common in China than in the West, and that it will be found increasingly prevalent in China as observation is extended more widely to the better classes of society. J. L. Maxwell was able to find only two cases among 12,000 in-patients in China. Lambert found only one case of diabetes in 24,000 out-patients in Nankin, all drawn from the lower classes of society.

J. P. Maxwell, reported 11 cases of diabetes from Yungchun, Fukien, while Dr. Park reported 8 cases, in five years, out of 3,000 to 5,000 persons seen annually in Soochow, Ki-

angsu. His practice is restricted to first-class patients.

Mosenthal (Tice, Vol. IX, page 96) says "The Jewish race has, according to many, been disproportionately subject to diabetes. In the dispensaries of New York and Baltimore, this fact is very evident. The Hindus in India are peculiarly susceptible to this disease. It occurs not infrequently in the colored population." Whether the general impression is warranted or not, that the affection is less common among them than among white people, is a question to be determined.

Allen ("Nelson's Medicine", Vol. III, page 57) says, "Negroes are by no means immune and correct statistics may show a rather high incidence among those in America, perhaps related in part to the frequency of syphilis. The Japanese, however, seem to afford an example of high racial immunity.

Joslin ("Oxford Medicine", Vol. IV, page 139) mentions the fact that "heredity and obesity unite to explain why the incidence of diabetes in the Hebrew race is more than double that in non-Hebrews." He says nothing about the Negroes, Japanese, or Hindus.

Summary and Conclusions

1.—Eight cases of diabetes in the Negro are reported in this paper. Six females and two males, in a series of 65 cases of diabetes mellitus.

2.—Diabetes is much less common in the Negro than in the white population as seen in the medical clinics of our hospitals.

3.—Syphilis is not an important causative factor in Negro diabetics.

Report of Cases

Case I

Ethel B. D. Colored. Female. Dressmaker. Age 33.

Admitted Dec. 1, 1920 to hospital. No. 6086.

Discharged Dec. 24, 1920.

Service of Dr. Albert E. Roussel.

Complaining of weakness and loss of weight.

Father died of pneumonia. Mother, 4 sisters and 3 brothers living and well. One brother died from tuberculosis. One sister died from "dropsy".

Previous History:—Had measles, whooping cough and typhoid fever in childhood. Appendectomy, tubes and ovaries removed.

Present Illness:—Entirely well until last February (1920) when she began to feel tired. She had polyuria about the same time. Two months ago (October, 1920), began to have great thirst and drank large quantities of water. Ankles began to swell last August (1920) and had sensation of pin pricking in ankle. Has had cramps in right leg which would awaken her in the morning. Hands and feet are cold. No itching or burning on urination. No pruritus. Has been weak, and felt as "if legs would give way." Lost 30 pounds in two months. Constipation. Shortness of breath on exertion. At times, has pain over the heart, and palpitation. Is very nervous. No dizziness, no faintness.

Physical Examination.—Well developed and nourished adult colored woman. Weight, 168½ pounds. Height, 5 ft. 1 in.

Eyes: react to light and accommodation.

Nose: some catarrhal condition.

Ears: negative.

Mouth: distinct sweet odor to breath. Teeth generally poor; many filled and capped. Tongue: heavily white-coated. Throat: negative.

Neck: no adenopathy, no thyroid enlargement.

Chest: Lungs: negative, except for some impairment over left apex.

Heart: negative. Blood pressure: systolic, 120; diastolic, 70.

Abdomen: negative. Large scar on abdominal wall.

Extremities: reflexes normal; no deformities.

Dec. 4, 1920—Alveolar air 35.

Dec. 10, 1920—Alveolar air 27.5.

Dec. 9, 1920—Alveolar air 25.

Voided 24 ounces urine first day, then 33, 59, 60, 73½, 25, 32, 35, 24, 56, 52, 48, 38, 58½, 52, 48, 40, 46, 50, 48, 42, 50.

Intake of Water, (24 hours), 30 ounces, 28, 70, 72, 72, 30, 40, 30, 30, 63, 56, 38, 32, 52, 48, 50, 30, 42, 48, 46, 50, 48.

December 24, 1920, weighed 162½ pounds.

Urine Analyses:

12/3/20, straw color; alkaline reaction; no albumin; no sugar; no red blood cells; no crystals.

12/4/20, 24 hour specimen; sugar 3.6%; no acetone; no diacetic acid.

12/7/20. Trace of albumin. Sugar present.

12/8/20. 11:30 a. m. Trace of albumin. Sugar, 3%; no acetone; no diacetic acid; 11:30 p. m., 5% of sugar; acetone present; no diacetic acid.

12/9/20. 11:30 a. m. No sugar; no acetone; no diacetic acid.

12/22/20. Urine analysis entirely negative.

Blood Count: 12/2/20. Red blood cells, 4,540,000. White blood cells, 9,070. Hemoglobin 90%. Differential—small lymphocytes 30%; Basophiles, 1%. Large lymphocytes, 1%. Transitionals, 1%. Polymorphonuclears, 65%. Eosinophiles, 2%.

12/6/20. Blood-urea nitrogen, 12.3 mgm. per 100 Cc.; creatinine, 1.96 mgm. per 100 Cc.; blood sugar, 290 mgm. per 100 Cc.

Blood Wassermann: 12/6/20. Antigen I. cholesterinized. Antigen II. Alc. syph. liver. Antigen III. Acet. Insol. lipoids.—Negative.

Quantitative—Negative: Serum 0.1 Cc.; 0.02 Cc.; 0.004 Cc.; 0.002 Cc.; 0.001 Cc. Hecht-Gradwohl

Feces: 12/2/20. Diarrheic; fluid consistency; green color; no mucus; no blood; no pus; bile present; alkaline reaction; no curds; no concretions; no parasites; no ova; vegetable fibers; muscle fibers; calcium soap. Bacteriological examination predominantly Gram-negative.

I have carefully watched her condition during the past six months; she is doing very well, and the urine is now persistently free from sugar and has been so for many months. She

still comes to our clinic occasionally (Polyclinic Hospital, University of Pennsylvania, Dr. A. E. Roussel's service) for urine analysis; and is kept under observation as a "latent," or subdued, case of diabetes.

She was admitted to medical ward 2/16/22. Discharged 2/23/22.

Temperature, pulse rate, normal.

Urine Analysis, 2/16/22. Amber, no sediment, acid, Specific Gravity, 1.010. Faint trace albumin. No casts. Few round epithelial cells. 2/19/22 *Blood Count*—Red blood cells, 4,900,000; white blood cells, 7,560; Hemoglobin 70-75% Talqvist's; 82% Sahli. Differential—Small lymphocytes, 21%; large lymphocytes, 1%; transitionals, 8%; Polymorphonuclears, 69%; Eosinophiles, 1%.

Sugar Tolerance:

Sugar I. 89 mgm. per 100 Cc. of blood.

Sugar II. 317 mgm. per 100 Cc. of blood.

Sugar III. 202 mgm. per 100 Cc. of blood.

Sugar IV. 92 mgm. per 100 Cc. of blood.

Blood Chemistry:

Urea—N. 10 mgm. per 100 Cc. blood.

Creatinine—1.3 mgm. per 100 Cc. blood.

Sugar—87 mgm.

Uric Acid—2.5 mgm.

Chlorides—NaCl 462; 280 mgm. per 100 Cc. blood.

Basal metabolism, 2/20/22. Rate plus 4.

Blood pressure: systotic, 120; diastolic, 65.

Weight, 139¾ pounds.

Case 2.

Patient: Edward C., negro. Dispensary No. 22929, Polyclinic Hospital.

Married; age 48; barber.

Came to the Medical Clinic (Dr. A. E. Roussel's service) complaining of fullness over epigastrium (March 23, 1920).

Discharged May 10, 1921.

Urine Analysis: Sugar 1.05%. Diacetic acid present.

4/8/20 Amber, acid, 1.015, cloud of albumin, sugar present 1.1%. No acetone; no diacetic acid; few hyaline and fine granular casts; few leucocytes; no red blood cells; no crystals;

4/22/20. Light straw color; acid reaction; trace albumin; no casts; no red blood cells; fine uric acid crystals; sugar 5.2%.

6/17/20. No sugar; no acetone; no diacetic acid.

Case 3.

Carrie A., colored woman: aged 55 years; married; two children living and well; two miscarriages. Parents dead. Menopause 4 years ago.

Chief Complaints: Backache, headache, polyuria.

Polyuria for some time. Pruritus and furuncles. Urinates very often during day.

General physical examination unimportant.

Urine Analysis: Acid. Specific gravity, 1.035. Very faint trace albumin; sugar, 2.1%; leucocytes—numerous clumps; few squamous cells; urates; yeast cells.

Differential blood count: Polymorphonuclears, 52%; small lymphocytes 40%; large lymphocytes 2%; Transitionals 3%; Eosinophiles 2%; Basophites 1%.

Blood Chemistry:

Sugar, 152 mgm. per 100 Cc. blood.

Creatinine, 1.4 mgm. per 100 Cc. blood.

Urea-nitrogen, 16 mgm. per 100 Cc. blood.

Case 4

Felix S., aged 56; laborer; Negro; Dr. A. E. Roussel's service, Polyclinic Hospital.

Complains of pain in the chest, loss of weight and weakness in his knees. Admitted to ward, Sept. 3, 1920; Hospital Record No. 4234; Disp. record No. 7927.

Two brothers died of yellow fever. Two sisters living and well.

Had measles and mumps.

Three weeks ago, began to have pain in the chest, and shortness of breath; suffers from headache; very costive.

General physical examination negative.

Weight 110¾ pounds.

Urine Analysis:

9/7/1920 shows no acetone; no diacetic acid; sugar 3.5%; no albumin; no casts.

9/10/20 Sugar 1%.

9/7/20 *Blood sugar*—340 mgm. per 100 Cc. whole blood.

Case 5

Elizabeth W., aged 55; Negress; admitted January 6, 1921; Dr. Geo. M. Piersol's service, Polyclinic Hospital; Hospital Record No. 6715.

Complains of frequent urination.

Parents died aged 72 (father) and 82 years (mother).

Patient had scarlatina, diphtheria, smallpox, typhoid fever. Had eight children: two living and well; six died soon after birth. About four years ago, began to lose weight rapidly. She had great thirst and passed large quantities of urine frequently.

General Examination:

Lungs: few moist rales are heard over both bases, posteriorly. Expansion is good and equal.

Heart: slightly enlarged toward the left; systolic murmur heard at apex and transmitted into the axilla. A systolic murmur is also heard at the second right interspace and is transmitted into the neck.

Abdomen: negative.

Weight, 149½ pounds.

Blood Pressure: Systolic, 190; diastolic, 100.

Urine Analyses: Showed sugar varying from 5% to 1.43% (Jan. 7, 1921 to Jan. 24, 1921). Specific gravity, 1.035. Acid. Trace of albumin. No casts.

Blood Chemistry: Blood sugar, 260 mgm. per 100 Cc. Whole blood; urea-nitrogen 10.7 mgm.; nonprotein-n 54.6 mgm; creatinine 1.92 mgm. per 100 Cc. blood.

Blood Count:

Red blood cells, 5,300,000. White blood cells, 8,300; Hemoglobin, 92%.

Blood Wassermann—negative (quantitative).

1/11/21 Alveolar Co_2 —18.

1/13/21 Alveolar Co_2 —15.

(Reagent apparently bad.)

She has an old osteoarthritis of the right hip with destruction of the head and neck of the femur. There are also calcareous deposits about acetabulum and head of femur. (Roentgenographic report.)

Case 6

Hattie M., Dr. Goepp's service. Polyclinic Hospital, Graduate School, University of Pennsylvania.

3/2/21 Complains of dizziness, and occasional sharp supraorbital headache for nine months. At times, she cannot stand because of dizzi-

ness. Lost 17 pounds in past two months. Drinks ten glasses of water daily. Ringing in the ears at times. Sharp cutting pains around umbilicus. All members of her family are obese. An older sister has diabetes mellitus.

Menses began at 13 years, normal. Two stillbirths; no miscarriages. Urinates twelve times during night. Married eight years.

Examination:

Obese colored woman.

Some pyorrhea present. Throat negative. Blood pressure, systolic, 135; diastolic, 100.

Heart and Lungs: negative.

Urine Analysis: Showed sugar present varying from 2.2% to 6.6%. Specific gravity, 1.035. (Aug. 5, 1921, to Nov. 10, 1921.) No diacetic acid; no acetone; trace only of albumin.

Baranay tests: normal.

Urine analysis, January 9, 1922, showed no acetone; no diacetic acid; sugar 4.2%.

Case 7

Mary Bell J., Negress; 8/30/21 - 9/30/21. Housework. Dr. Goepp's service, Polyclinic Hospital. Hospital record No. 12252. Itching on inner side of thighs; epigastric pain and headache. Family history negative.

Had measles and mumps; otherwise well; married; five children; no miscarriages. For past two years, has had continuous itching on inner side of thighs. For past six or seven years, has complained of pain in left lumbar region, continuous and sometimes sharp, radiating up back around tip of scapula. Occipital headache off and on for six or seven years; polydypsia, polyuria, nocturia, severe burning on urination. Periods regular. Last child, 20 years ago. Menopause at 45 years.

Weight 117½ pounds.

Blood pressure: systolic, 114 and 120; diastatic, 68 and 68.

Urine Analysis: 8/31/21. Specific gravity, 1,018; trace albumin; sugar positive; no casts; few leucocytes; few amorphous urates.

9/7. Specific gravity, 1,020; no albumin; no casts; no sugar; no red blood cells; amorphous triple phosphates.

9/1/21. Renal Function Test.—1st 40%; 2nd 10%; 3d 5%. Total 55%. 3 hours.

9/3/21. Urine analysis: Specific gravity, 1.035; sugar 1.86%; no acetone; no diacetic acid.

Blood Count: 8/31/21. Red blood cells, 5,130,000. White blood cells, 13,200; Hb 75%. Small lymphocytes, 40%. Large lymphocytes, 4%. Transitionals, 1%. Polymorphonuclears, 55%. (Dr. Dardin.)

Blood Chemistry: 8/31/21. Sugar, 286 mgm. per 100 Cc. blood. Nonprotein-n 30 mgm. Urea-n 19 mgm. Creatinine 2.6 mgm. Chlorides 255 mgm. Cl. per 100 Cc. blood or 421 mgm. as Na Cl. (Dr. Cowan.)

Blood Sugar: 9/13/21. 150 mgm. per 100 Cc. blood. Nonprotein-n 32. Urea-n 14. Creatinine 1.6.

Urine Analysis: 9/15/21. Specific gravity, 1,020; sugar, .62%; diacetic acid and acetone negative. (Dr. Darden.)

9/20/21. Total 1640 Cc. urine sugar present.

9/21/21. Total 1500 Cc. negative for sugar.

9/23/21. Blood sugar 68 mgm. Urea-n. 25 mgm.

9/28/21. Urine; no sugar; 1900 Cc. Specific gravity, 1,010.

Blood Wassermann negative. 8/31/21. (Yagle and Kolmer.

Gastric Analysis: 9/1/21. 40 Cc. normal gross appearance.

Total acidity, 28.

Free HCl, 4.

Combined acids, 14.

Acid salts, 10.

Lactic acid, positive.

Blood, positive.

Starch and fat, negative.

Specimen	Total	Free HCl
1	22	
2	20	
3	50	
4	26	20
5	16	

Eye Examination: Media O. D. appears clear. Disc large, oval 90%, central cup, outlines clear. Fundus normal. O. S. shows spots of opacity on lens capsule. Vitreous shows floating opacities. Disc and other details seen slightly hazy, probably due to vitreous changes. Disc large, slightly oval, healthy color and central cup. No lesion of retina or choroid apparent through undilated pupil.

Right, 6/30; left, 6/15.

9/28/21. Hearing slightly decreased. Tubal stuffiness. Contraction of both drums, particularly the left. (Dr. H. S. Wilder.) Nothing of importance on physical examination, except marked perineal relaxation and huge cystocele. Reflexes normal. Small tumor on inner side of calf of left leg, about size of a large almond and fixed to the skin. Eczema of both thighs.

Case 8

Eliza H., Philadelphia. Housewife. Negress; age 55; married. Dr. Goepp's service. Complained of pruritus vulvæ and polyuria. Menopause at 41 years. Two children. No miscarriages. No stillbirths. Has had pruritus vulvæ for three or four months and, with this, had polyuria and excessive thirst.

4/16/20. No. 1964 (Polyclinic Hospital) Hospital Record.

Urine Analyses:

4/8/20. Sugar, 1.8%; Acetone, negative; Diacetic acid, negative.

4/9/20. Sugar, 0.98%; Acetone, negative; Diacetic acid, negative.

4/10/20. Sugar, negative; Acetone, negative; Diacetic acid, negative.

4/12/20. Sugar, 4.3%; Acetone, negative; Diacetic acid, negative.

4/13/20. Sugar, 2.02%; Acetone, negative; Diacetic acid, negative.

4/14/20. Sugar, negative; Acetone, negative; Diacetic acid, negative.

4/15/20. Sugar, negative; Acetone, negative; Diacetic acid, negative.

3/29. Acid 1.030; no albumin; sugar plus; no casts; no red blood cells; few white blood cells; no diacetic acid; no acetone.

3/31. Sugar, 3.01%.

4/2. Sugar, 7.1%; no diacetic acid; acetone, faint trace.

4/5. Sugar, negative; acetone, faint trace.

4/6. Sugar, negative; acetone, faint trace.

4/7. Acid, 1.025; sugar, 2.8%; acetone, negative.

Surgical Seminar

Conducted by GUSTAVUS M. BLECH, M.D.

SOLUTION of Surgical Problem No. 4: The delay of Dr. A. Maxwell Lightstone of Montreal in sending his solution is recompensed by a solution which, to say the least, is as startling as it is interesting. In a telegram to the Managing Editor, we learn that his diagnosis has been confirmed by an autopsy *in vivo,* at a well-known hospital, which fact will give rise to important discussion. For the reasons given, let us recite the problem again, though briefly.

Surgical Problem presented by Dr. Lightstone (Sept. issue): A man aged 34, after lifting some heavy cases, noticed a dragging pain in his left testicle and believed that he had a hernia. There was no hernia, no evidence of any abnormality in the testis, no rise of temperature or pulse, no increase or decrease of blood pressure, no sign of any disease of the lung, no evidence of previous venereal infection. The only thing was a slight pain elicited by palpation of the region of the right kidney.

Solution by Dr. G. M. Blech: Shortly after receipt of the problem, I prepared the following solution: In the endeavor to solve any written clinical problem, we proceed much the same as we do at the bedside. The task is rendered comparatively easy as the actual tests are already made for instead of by us.

In this case, we can assume that the past history, outside of the "trauma incidental to the lifting of heavy cases" contains nothing relevant, as otherwise it would have been stated in the problem.

There remains the factor of trauma. We have here the patient's statement that he had lifted heavy boxes and that he was under the impression to have been ruptured through this exertion.

Experience has taught us to take such statements *cum grano salis.* Let us suppose, for the sake of argument, that we are consulted by a man, aged 34, a merchant, as is Dr. Lightstone's patient, who gives an identical history and who is shown to be the sufferer from, say, a right inguinal hernia, which the patient professes never to have seen there before. Let us assume that the hernia shows unmistakable evidence of inflammation—"herniitis."

Are we going to accept the patient's conception with regard to cause and effect and, without further ado, pronounce the case as an "acute" hernia, suddenly produced by the muscular exertion incident to the lifting of heavy objects?

Supposing a damage suit were involved and we went into a court of record and, under oath, submitted such a complete diagnosis—I mean a diagnosis with an etiologic factor. Would not our testimony be thrown out through the overwhelming influence of opposing testimony by generally acknowledged experts of unquestioned integrity?

Indeed, we all know, or should know, that a hernia does not develop suddenly, that most hernias are congenital or at least of long previous duration as "potential" hernias and that, while the patient may be in good faith in his belief to have been free from any abnormality and to have become ruptured suddenly, we interpret this to mean that the trauma, or whatever it was, merely increased the size of hernia sufficiently to annoy and, thereby, to become a matter of recognition by the patient.

Doubtless, Dr. Lightstone's patient, like countless other men engaged in work demanding physical exertion of some sort, has been lifting cases ever since he was in business. Why has nothing unusual occurred on a previous occasion? Surely, laymen are inclined to seek a cause or explanation for any sudden illness, and what is more "handy" than some plausible event immediately preceding the occurrence, in spite of the fact that the same event has taken place day in and day out for some time past? Certainly, the traumatic factor can be ruled out in this case as of no significance whatever in the problem under consideration.

With the etiology eliminated or unknown, nothing else remains but a thorough study of the subjective and objective phenomena.

The former are seldom pathognomonic of anything in particular, while the value of the latter depends on a variety of circumstances too numerous and complicated to be discussed in a brief article.

However, by a process of elimination, we can leave out whole classes of diseases. In our case, for example, there is no need even to consider inflammatory disease of microbian

cause, for the simple reason that a normal body temperature alongside a normal pulse rules this out with certainty.

The problem, accordingly, narrows itself to a class of disturbances of a purely mechanic character.

Inasmuch as the phenomena (subjective) seem to point to the urinary apparatus and that the pain in the left testicle is, in all probability, one of the referred (not reflex) type, really only three conditions need be considered, viz.:

1. Nephrolithiasis.
2. Hydronephrosis.
3. Distortion of the ureters.

Of these, none can be selected with any degree of certainty without further study of the case; urinalysis of the catheterized urine, catheterization of the ureters and, last but not least, the Rœntgen examination are the sole legitimate means by which an attempt can be made to establish a scientific diagnosis.

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Other solutions: Colonel Acheson has already disposed of this case in the October issue. He undertakes nothing with the data at hand. As a diagnostic exercise, the data are sufficient for a tentative discussion. The fact that no diagnosis can be arrived at with certainty does not lessen the value.

Dr. B. M. A. writes: The relation of the tenderness in the region of the right kidney to the pain in the left testicle is puzzling, but in all probability is one of reflex character. I can think of only one diagnosis that is likely to cause similar symptoms: stone in the kidney or ureter.

Dr. P. L. says: I see very little to hang any sort of a diagnosis on. May be, after all, there is an old gonococcal infection and the man suffers from a stricture in the prostatic urethra. Such a condition may cause pain in the testicle, though physical examination reveals nothing abnormal in that organ. As for the tenderness in the region of the right kidney, that may mean merely muscular soreness from too much exercise and is, *per se* of no great significance.

(Note: Dr. L. is a western general practitioner who intends to specialize in eye, ear, nose and throat work.)

Our old friend and coworker, Dr. Isaac E. Crack, of Hamilton, Ont., in his usual terse style contributes:

One could hardly express a positive opinion of this case in the absence of urinalysis. However, I would suggest that Dr. Lightstone's patient was suffering from nephrolithiasis.

Some years ago, I had a man who suffered several very severe attacks of renal colic, many of which were preceded by dragging pains in one testicle. This man also suffered from pains in the testicles in the intervals between attacks. We know that renal colic is often brought on by jarring of the body or by unusual muscular exertion.

The lifting of heavy cases by Dr. Lightstone's patient, while not inducing actual renal colic, caused enough disturbance to lead to premonitory symptoms of such an attack.

Other possible conditions: Dr. Lightstone does not state whether this man had either a varicocele or a very relaxed scrotum. A man exercising beyond his usual amount with either condition present might easily suffer from pain in a testicle. . . . I am sure sure, Dr. Lightstone did not make a diagnosis without a very careful urinalysis:

Note by the Editor: Dr. Lightstone stated in the original letter, as published in the September issue, that he had made a diagnosis on the strength of the data, as presented, and that the diagnosis was corroborated at the hospital.

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Solution by Dr. Lightstone: I am not a surgeon. Probably, I am thus in a better position to criticize surgeons. In making my diagnosis, I am always thinking of my past failures, while surgeons are prone to forget theirs.

The usual diagnosis for pain in the testicle, be it right or left, is orchitis, epididymitis. If there is also pain in the lumbar region, one immediately shoots renal calculi or stone passing the ureter. That is, speaking of urologists.

My gynecological enemies will perhaps think of oophoritis, inflammation of the fallopian tubes, etc. They would forget that the patient had a pain in the testicle, and is not a female woman. My surgical friends would scratch their heads, think of everything from gall bladder down to a kink in the cecum, and advise explorative laparotomy.

I came to the conclusion that the symptoms were those of appendicitis, because the pain in the testicle was only a referred pain, coming from the nerves about the appendix or from the nerve branches coming from the first lumbar nerves, from which we derive the anterior scrotal nerve. These are derived, I believe, from the spermatic plexus. Here, we have the reason for pain in the vaginalis testis. I admit, however, that the pain occurs more often in the right testicle; but it may also happen in the left testicle.

My diagnosis of appendicitis was owing to the pain in the right side of back or posterior abdominal wall from the theory of transferred

pain. I need not go any further than quote Behan in his book "Pain" (Appleton & Co., 1915) page 520 and 521. He states: "transferred pain means that form of pain which is left on the opposite side or at higher or lower level of the body than the pain causing it. It is due to the transmission upwards or downwards in the cord of the stimulus from the point of origin. It may be seen how an appendiceal pain may be transferred across to cord and be felt on the other side; its conduction to the thoracic sympathetic ganglion and thence its transference either to the anterior or posterior division of the nerve, the pain being felt either in the anterior or posterior abdominal wall."

The symptoms that I described in the September issue of CLINICAL MEDICINE form one of the rare symptom complexes of acute appendicitis.

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Comment: I for one, am absolutely forced to take issue with Dr. Lightstone's claim that he is better fitted to criticize surgeons because he remembers his failures, while surgeons are prone to forget theirs.

I have always looked upon the medical profession in Canada as men of high, professional and ethical ideals. Their grounding in the medical disciplines has been on a solid basis for a long period, their clinical teaching has been rich in variations, sufficiently so to stimulate logical thinking; so, it is really hard to believe that the surgeons that Dr. Lightstone has labored with or has seen in his country are "prone to forget."

In spite of the fact that I have had my first medical training in continental Europe, I have come to look upon the real surgeons in the United States as earnest and scientific men, whose value as useful members of human society cannot be estimated highly enough.

Of course, the woods are full of pretenders and charlatans, of loud-mouthed, boisterous, self-advertising would-be surgeons, whose sole god is money, and who do not seem to mind that decent folk would have nothing in common with them. But, the stench raised by these "offshoots" is condemnation enough. Why allude to them?

Now, with reference to the diagnosis. There is no question about the correctness since, in a telegram to Dr. Achard, Dr. Lightstone kindly informs us that his patient was operated on the very next morning by Dr. Keenan, at the Royal Victoria Hospital, and that the operative diagnosis of acute appendicitis was confirmed by the pathologist.

The only question that presents itself is, whether such a diagnosis is possible with the data as given. This becomes a matter of great importance.

The question of referred pain in acute appendicitis, even involving pain in the back and right testicle, rare though it be, is by no means new. The literature is simply full of it.

But (and here is the rub) pain alone, whether typical or atypical, is in itself not sufficient; the pulse and temperature playing important, nay, almost prognostic roles in the estimation of the intensity of the infection (threatened perforation!).

But, say you, there is no rule without an exception and, after all, any blamed fool can diagnose acute appendicitis when the case is pronounced. It takes a keen diagnostician to recognize acute appendicitis, especially of the catarrhal type, before the attack has been fairly developed.

I even go a step farther. I say that I, personally, am no authority whatever; that the fact that I have been a surgeon in active practice nearly thirty years and that I have seen over a thousand cases, does not yet qualify me to speak with any degree of authority. However, the privilege I have is, to collect the combined experience of recognized leaders in surgery and, basing on these experiences, I have the right to formulate certain axiomatic rules.

There is no doubt in my mind that, preceding an attack, we can observe symptoms, directly due to the pathologic changes in the appendix, which may be so vague as to prove misleading. Now, what are these symptoms? Slight intestinal catarrh, constipation, occasional colicky pains, particularly so in the region of the umbilicus; gastric distress with pains emanating from the abdomen. There may be nausea, an inclination to diarrhea, etc. These symptoms may exist for days, months and years, the patient may have been dieted and drugged and declared hysteric, until the catastrophe clears up our ignorance.

While, occasionally, cases have been observed which seemed to point to cardiac trouble, the majority of cases in the early stages pointed to digestive and bladder troubles, and it is indeed when, after a thorough examination, disease of the stomach, liver, intestine, bladder and adnexa (in the "she-females") can be ruled and that the appendix has to be studied.

Personally, I have had case after case referred to me for possible gastroenterostomy, in which the removal of the appendix put an end to all symptoms.

The innervation of the appendix, as well as

the position of the latter, are responsible for the referred pains elsewhere in the abdomen; for, the appendiceal nerves are in direct relation with the upper plexus of the sympathicus.

Of course, an appendix situated on the ileopsoas muscle is more likely to stimulate hip disease. I have seen two cases in which the patient complained of lumbago.

Pain in the right testis has been observed; pain in the left, never as far as my knowledge of the literature goes.

Now, as regards the acute attack, here are the cardinal phenomena: Suddeness of the attack; vomiting; temperature rise; pains in the abdomen, localized, referred or diffuse. Tenderness of the abdomen to pressure. Occasional chills.

Given an acute attack without rise of temperature or perhaps a subnormal temperature (though the pulse is invariably fast), and we are confronted with an extremely serious situation.

The case is open for further discussion.

Surgical Problem No. 6:

Mrs. N. N., age 55, has suffered for some time from irregular bleeding from the uterus, though she is supposed to have passed the menopause. Suspecting cancer, she seeks your aid. On physical examination, you find the uterus irregularly enlarged to about three times its size, hard in consistency. You diagnose fibromyoma and advise operation. She is operated on, Tuesday at 10 a. m., under general anesthesia (morphine, atropine, ether), a typical hysterectomy being made about half an inch above the cervix.

The patient leaves the table in apparently good condition. Pulse 100.

The patient's pulse, on your visit at 7 p. m., shows a rate of 90; temperature, 101°F., respiration, 28; tongue moist, eyes bright. Patient complains of gas pains. Condition next forenoon unchanged. At 4 p. m., the next day, the patient's countenance has lost its satisfactory aspect somewhat. The patient seems restless. Pulse, 124. Temperature, 99° F. Respiration, 32. Abdominal palpation negative. Tongue furred and somewhat dry at the edges.

Required: Estimate of the situation, and therapy, if any.

Care of Surgical Patients

In compliance with a promise made some time ago, I begin a somewhat desultory discussion of the care of surgical patients.

As will be recalled, the Journal was asked to publish in this department an article on the postoperative care of patients. Now, in my opinion, the postoperative care becomes an independent problem only in emergency cases; that is to say, in that class of imperative or emergency surgery which allows us no time for suitable preparation of the patients for the ordeal. In all other cases of a surgical character, postoperative care is more or less dependent on the character of the preoperative care, and, in the majority of instances, represents a supplementary action of the surgeon, after the conclusion of the therapeutic acts.

This may sound somewhat weird. Every one will, however, see clearly that, no matter how excellent the aftercare of an operated patient may be, it will prove ineffective in the face of neglected opportunities *ante operationem*.

It has been my privilege to read several textbooks on this subject. How one could fill a fair-sized volume with such material, may appear something of a problem until one goes over the contents, and then the question suggests itself: Is all this to be remembered?

The student, the young physician entering on his practical year in a hospital is, naturally, a bit bewildered. Gradually, however, he sees that the hospital follows a definite routine in simple as in complicated cases, so that the gravity of the disease and the inroads it has made on the patient's constitution seem the principal causes of grave postoperative complications, rather than surgical technics. Eventually, the impression is gained that the "standing rules" of the hospital are really the last word in surgical care and that, whatever deaths occur, are inevitable and not to be laid at the door of the management of the patients.

This respect for established institutions and authority, so characteristic of the student bodies of continental Europe, has one great drawback—the student becomes a blind follower of his teacher. From a purely sentimental point of view, this is a condition looked upon by many as ideal. In my humble opinion, the ideal condition is to be found only there where even undergraduates are led to think for themselves. Science has no sentiment, and the interests of science—and those of humanity—are best served by independent and unhampered research.

The pre- and postoperative care is not a matter which requires a large number of rules and regulations. That there develops a certain routine in one and the same class of affection, goes without saying. This must, however, never be at the expense of individualization.

[*To be Continued.*]

The General Practitioner

Talks About Professional and Personal Problems

Conducted by WM. RITTENHOUSE, M.D.

Child Training

[*Continued from November Issue, page* 831.]

THE whole subject of child training is intimately bound up with that of character building and the use of penalties. If sound character can be built up without the use of punishment, well and good; it is the object that is important, rather than the means employed to attain the object.

Our aim should be, so to build up the child's character that when he is grown up he shall be self-reliant, self-controlled, courageous, kindly and considerate towards others, a citizen with a conscience and the will to respect the rights of others as well as to maintain his own.

This result can be arrived at only by years of patient training, during which parental control is gradually being replaced by self-control on his own part. I say "gradually," because, if we expect self-control too soon in a child we may be disappointed. If we put too much responsibility upon him, he may break down and go backwards. Children are like nations in this respect. If a people attempt self-government before they are sufficiently educated to exercise it, they usually revert towards barbarism. So the parent must exercise control and allow the child to assume responsibility only as he is able to bear it.

There are two ways in which parents try to secure good conduct in their children—namely, by fear or by love. In the latter, I include conscience, the sense of duty, the desire to please. The old way was mainly by fear. Fear as a motive is better than no motive at all, but it involves much unhappiness that could be avoided, and is on the whole less reliable than the opposite course.

There is a sense in which fear is not objectionable: it is the one in which we use the word when we speak of having the fear of God in our hearts. It is then but another name for conscience—the self-disapproval which we feel when we do wrong.

In my childhood, most fathers were rather stern towards their children, but it was a sternness controlled by kindliness. It was part of their religion. They believed in the use of the rod; but most of them rarely used it. When they did, they made it clear that it was for the child's sake, and that the culprit would be gladly restored to favor if repentant. As children, we feared our fathers more than we did our mothers; but it was not a slavish fear. It was merely that we knew, fathers could not be trifled with, while mother-love often overlooked peccadillos that were not serious. When mother called us in the morning, in time to do our "chores," we sometimes turned over for another snooze; but, when father called from the foot of the stairs, his clear, ringing "Boys!" was followed instantly by our prompt, "Yes, sir!" and the thump of our feet upon the cold wooden floor. If we received merited punishment for some serious misdemeanor (and he never inflicted any that was unmerited), we were as ready as he for the reestablishment of affectionate relations.

It seems to me that those, who take the ground that all punishment is degrading, are begging the question. It depends entirely upon the spirit in which it is inflicted, and we must judge by the effect produced. If it is used in such a manner that it leaves the child sullen and unrepentant, the effect is certainly not desirable; but if it produces repentance and a desire to be restored to parental favor, it is difficult to see where the degradation comes in. Where the proper spirit of comradeship between parent and child exists, if punishment is merited and is inflicted in love, there need be no fear that the effect on the child will be anything but good.

Perhaps the puritan sternness of family government of past generations was unduly severe and produced some unnecessary unhappiness. But, there is no denying the fact that they developed in their children a degree of sound character and a moral fiber that are both decidedly lacking in the generation growing up today under very different conditions of home atmosphere. There is a serious danger to our nation in the flabby moral fiber and undevel-

oped conscience of the generation that will soon be in charge of affairs. It is quite fashionable to smile at the idea of conscience in business or political life. But, that way lies disaster. If the growing child is to acquire moral stamina anywhere, it will have to be in the home. If not developed there, the chances are that it will go undeveloped.

In building character, there is no one lesson more important than that which teaches the child to sacrifice present pleasure for future good. The vigorous appetite of childhood is the source of many opportunities for pointing out how much better it is to exercise moderation and enjoy good health as a natural result, than to gratify the appetite by yielding to temptation and then suffer illness in consequence.

Frank Crane says: "Everything should be done to make the child desire self-mastery above all things. The endurance of unpleasant things should be encouraged. He should be rewarded for perseverance. He should be made to feel that you dislike and disapprove to all softness and yielding. Habits of self-denial should be formed, and the pleasures arising from these habits pointed out. We do bodily exercises to keep our muscles supple; why should we not do spiritual exercises to keep our wills supple?"

William James said that a man ought to do at least two things that he hates, every day, just for practice.

In a word, we ought to resist desire when that helps us to get the gratification of a better desire. The more we yield, the harder it becomes to resist; and, the more we resist temptation, the easier it becomes to do so. Children can understand this and learn to practice it.

A great help in teaching them self-control is the idea of a dual personality. Each of us carries a good and a bad individuality that are always striving against each other. Even the great apostle of Christianity to the gentiles did not disdain to use this concept in teaching his followers. "The good that I would, I do not; but the evil which I would not, that I do."

Even a child of four or five can understand his mother when she tells him something like this: "There is a bad boy inside of you who sometimes comes to the top and gets you to do wrong things; but you can put him down if you try hard." Or on another occasion; "Oh, I am afraid you let the bad boy come to the top when you did that!"

Children are fond of playing "make-believe." "Now, I am a teacher and you are my scholars," says the little girl to her playmates. "Now I am a bear, and I'm going to growl," says the little boy, and immediately his playmates pretend to be very much frightened.

Sometimes children develop this imagination world to an amusing degree. Two little girls were playing school when this actual dialogue was overheard:

"When I grow up I am going to be a teacher and keep school." "Yes, and I'll send my children to your school!" "Then I'll whip 'em and whip 'em, and whip 'em!" "You mean thing! What did my poor children ever do to you?" Such far-reaching injustice was more than she could bear.

The idea of double personality chimes in well with this tendency of children to create an imaginary world. The boy will apply discipline to the bad boy inside of him with more enthusiasm than he would to himself. It resembles a game.

There may be children who cannot be controlled without corporal punishment. To strike a child, is a thing to be avoided if possible. I think that, to most parents, the recollection of having used the rod is not an agreeable memory. There goes with it the feeling that a little more tact, a little more wisdom would have sufficed to avoid it.

However, it must be borne in mind that children's natures differ greatly. There is occasionally a boy so perverse, cantankerous and disobedient that the wise application of physical pain is the only thing that will make an impression. The child who is persistently destructive or cruel to other children or to animals must be brought to book when other, milder means have failed; and a good trouncing will do him good like medicine. Of course, it goes without saying that a child should never be struck about the head; nature has provided a safer place. The instrument should be something that stings without bruising; the hand of the adult is heavier than he realizes. The apple switch of our childhood was ideal; it stung but did not injure.

Summary

1. In training children, the great and indispensable necessity is self-control on the part of the parent.

2. The strongest bond for leading the child in the path of right is love—not sloppy sentimentalism overflowing with terms of endearment, but genuine comradeship.

3. Obedience must be absolute and unconditional.

4. It must be secured by penalties if milder means fail. Better use the rod than let the child go to the bad.

HOLIDAY BOOKS

The Cruise of the Hippocampus. By Alfred E. Loomis. The Century Co., New York. 47 illustrations. 252 pages. $2.00.

This is a delightful salt-sea yarn, commended to all lovers of the sea and especially of yachting. Three good fellows, of the type who love adventure and whose home is the wide world, make this four months' cruise from New York to Panama in a 28-foot yawl, the smallest craft that ever passed through the Canal.

The author is the son of the late Charles Battell Loomis, the well known humorist; and one does not read far before discovering that the father's mantle of humor has fallen upon the son.

There is quite a post-war-flavor about the cruise; for, not only are all the three ex-service men, one in the artillery, one in the regular navy, and the other in a submarine chaser; but the craft herself saw service as a submarine chaser and, for this cruise, was fitted out with a yawl rig of mainsail, jib and jigger, intending to make the cruise under sail, while retaining the gasoline engine for the purpose of getting out of tight places. This proved to be a wise precaution; for, the little craft seemed to develop the trick of getting herself into any number of tight places before the cruise was over. Between the two covers of the book, the reader will have plenty of thrills and many a good laugh. The narrative is a true one, and the author remarks that its truthfulness is "alleviated" by its humorous treatment. It is more than that—it is illuminated and made joyous by it; it is full of human interest, and, before the Hippocampus makes Balboa, you will like the staunch little vessel and all aboard her.

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Fair Harbor. By Joseph C. Lincoln. D. Appleton & Co., New York. 379 pages. $2.00.

Readers who have "discovered" Joseph C. Lincoln are to be congratulated. Thousands are weary of novels on sex problems, on social problems, on labor troubles, etc., and are eager to welcome a writer who simply tells a good story and draws characters from life. Joseph C. Lincoln has done a public service in preserving for the future the quaint, humorous, shrewd, honest type of the people of Cape Cod. His books are growing more popular with each new story. In "Fair Harbor", he has undoubtedly given us his best.

Captain Sears Kendrick, after a life on salt water, returns to his home town, his savings wiped out by unfortunate investments and with a leg crippled in a railroad wreck. Unable to resume his life at sea, he becomes the manager of "Fair Harbor," a Home for Mariners' Women, the wives, sisters and daughters of followers of the sea. The old sea dog, kindest, gruffest and most human of souls, is set down as director of a group of cantankerous women, such a group as the pen of Lincoln can picture so well. One can easily imagine the possibilities. Smiles and chuckles spring up on every page.

The sign of this Home reads: "Without, the stormy winds increase; within, the harbor is all peace." That the old captain found peace at "Fair Harbor", can hardly be said, but the story is, nevertheless, a heart-warming one.

Lincoln himself was born on Cape Cod, and his father was one of those old sea captains who are the originals for the ones that are pictured in all his books and whose traits are lovable as well as amusing.

No one need hesitate to buy this book either to read or as a gift to a friend. It is bound to be appreciated.

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My Discovery of England. By Stephen Leacock. Dodd, Mead & Co. 264 pages. $1.50.

Here is a book sparkling with humor and, yet, interspersed with many a nugget of wisdom. Those who have enjoyed the author's *Nonsense Novels,* or his *Moonbeams from the Larger Lunacy* will find that the present volume fully sustains his reputation. He was born in England, but has lived in Canada most of his life. He has made in that country and in the United States a reputation as humorist and lecturer. This book is the result of a lecture tour in England, Wales, and Scotland, and he has great fun in contrasting English customs inspectors, interviewers, audiences, universities, etc., with their prototypes in America. He hits off, without mercy and yet without malice, the faults and foibles of both countries. His fun is sly and incisive, and there is also much sound philosophy mingled with it. His remarks on "Oxford as I see it," "What is the Matter with England?," "English Humor," furnish food for reflection. I have never seen a better comparison between the real spirit of English and American universities than he draws.

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John Burroughs Talks. Reminiscences and Comments, Reported by Clifton Johnson. 358 pages. 40 illustrations. Houghton Mifflin & Co. $4.00.

We have here a new sidelight on "Oom John," as Roosevelt affectionately dubbed him. It is a charming book in every sense of the term. During the few days it has lain on my desk for review, a number of people have picked it

up with the remark, "What a beautiful book!" referring to its get-up as a piece of book making. But it is equally delightful within. Like thousands of other admirers of Burroughs, I have for some years read each of his books as they came out. But, this book presents him in a new aspect. We naturally feel towards any one, who has achieved distinction in some particular line, as if he were a man of a little different clay from ourselves—a sort of deified being. These talks show him to us as a common man—a very human sort of man—a plain farmer making his living from the soil. For, it has been only in later years that the income from his writings made him independent of his uncertain crops of celery, grapes, peaches, etc.

Clifton Johnson, well known author, editor, and photographer has played the part of a Boswell in reporting the conversations of the naturalist, and he has played it well. Ever since 1894, the friendship between the two men led to Johnson making occasional visits of a day or two to his friend at Slabsides or Riverby. On these occasions, the delightful talks of the sage were carefully noted down by the visitor, to be afterward extended in full, and submitted to Burroughs for criticism or approval. "You have caught admirably the spirit and even the words of our talks," was Uncle John's comment.

The reporter has kept himself in the background, and we feel that it is Burroughs who is talking.

An interesting feature of the 'Talks' is their frankness in speaking of his friends. He never "whitewashed" them. He talked freely of Whitman, Roosevelt, Edison, Ford, Lincoln, and Wilson, as well as of Mrs. Burroughs and of his other near relatives. He found flaws in all of them, but their admirable traits were also emphasized. He was frank, but never captious; blunt, but good-natured and just.

Every one of the thousands of readers of Burroughs' books should also have a copy of this autobiography, for that is what the 'Talks' are in the best sense of the word. They show a most interesting side of a life that attracted the interest and affection of many of the best minds of our day.

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The Last Harvest. $2. After Burroughs' death, it was found that he had left material for a book which was later published with the title *Under the Maples.* Enough material has since been found (essays, etc.) for another posthumous volume which has just been published with the appropriate title, *The Last Harvest.* This will undoubtedly be "Finis" to the literary work of the sage of The Catskills, who died ripe and full of years.

Wm. Rittenhouse.
2920 Warren Ave.

A ROYAL HEART

Ragged, uncomely, and old and gray,
A woman walked in a Northern town;
And through the crowd, as she wound her way,
One saw her loiter and then stoop down,
Putting something away in her old, torn gown.
"You are hiding a jewel!" the watcher said
(Ah, that was her heart, had the truth been read).
"What have you stolen?" he asked again;
Then the dim eyes filled with a sudden pain,
And under the flickering light of the gas
She showed him her gleaning. "It's broken glass,"
She said. "I hae lifted it up frae the street
To be oot o' the rood o' the bairnies' feet!"
Under the fluttering rags astir
That was a royal heart that beat!
Would that the world had more like her
Smoothing the road for its bairnies' feet!

—*W. H. Ogilvie.*

Good Medicine

Let us learn as we go, but not forget what we know

Conducted by GEORGE H. CANDLER, M. D.

LES AMOURS DES JEUNES CHIENS
Puppy Love

PUT that way, it doesn't sound quite as provocative of the complacent smirk or tolerant smile as when the more common term "puppy love" is used. And yet, recent events—widely heralded by our esteemed family papers—would lead us to believe that there isn't so much to smile or smirk about in *some* "puppy loves"; at least, not for those responsible for or directly related to the "puppies" involved. Moreover, other people with reasonably demure "puppies" of their own are beginning to tremble a little lest some fine morning they wake up and find Elizabeth's bed vacant, her best clothes gone and at least five dollars and sixty-five cents missing from the Little Light Bearer's Bank—which, of course, should be inviolate. Then, even while they are calculating the deficit, word may reach them that Thomas Augustus in the next block has also mysteriously disappeared, together with the domestic bus, which, though of the vintage of '19, is still capable of making somewhere in the vicinity of twenty-five miles per hour (if stepped on *hard*). Therefore, given enough gas in the tank and good luck with the tires, John Augustus and Elizabeth (whose combined ages might reach thirty) may, ere their flight is discovered, be finding out all sorts of wonderful things for themselves, a full hundred miles away from where anyone knows them!

An extremely disconcerting and decidedly embarrassing position for those at home! One, moreover, which causes the fond mother of Elizabeth to assure EVERYBODY that she "just knows HER dear little girl must have been mentally overpowered by that horrid John Augustus; for, of herself, she never, *never* would have done such a dreadful thing", and the father of John Augustus to growl that he "knew that demure little cat (Elizabeth) wasn't half as innocent as she made out to be—goldarn girls, anyhow!" All of which is, of course, extremely elemental and entirely devoid of good common sense. If Elizabeth's mother and the irate father of John Augustus were capable, under the circumstances, of reasoning things out calmly, they would understand that neither Elizabeth or John Augustus have transgressed any natural law, but "mutually agreeable" and stirred by the cosmic urge which "has been from the beginning and shall be, world without end, Amen!" merely took things into their own hands and, regardless of economic conditions and the rules laid down by Polite Society for its own wellbeing, have done what their ancestors have done—in one way or another—Moreover, they did it openly, above board and in the sight of all men!

A whole lot of "puppies"—and older dogs—haven't the courage (or naïveté) to do that.

The pity of the whole thing is, of course, that (considering Mrs. Grundy, the H. C. of L., and the condition of the family exchequers) the two can hardly be allowed to *remain* one. Therefore, ruthless separation, all sorts of scandalous comment by luckier neighbors, and a distinct depreciation in the ultimate marriageable value of the girl result. The boy is henceforth usually regarded as a "smart dog" and women generally rather admire him. Had these particular "puppies" only been discreet enough to love in their home pastures and without taking a prolonged honeymoon in Pa's highly proper old bus, to say nothing of hypothecating the Light Bearer's pennies, all might yet have been well and they both, doubtless, would, after some years had passed, "married sensibly" and settled down to become estimable—if not leading—citizens.

What they really did was, to act prematurely, precipitately, primitively; and it is up to us to discover WHY they did such a distinctly disturbing thing. How they did it, we are informed.

To begin at the very beginning, WHY should Elizabeth (who will be fifteen next birthday) and John Augustus (who *is* fifteen) take that five dollars and sixty-five cents and the revered family ark, and flee the parental roof? Because, they will both tell you, they were "Very Much In Love." Immediately comes the fifth-rate

philosopher and snorts, "Puppy love!" and we thereupon are constrained to ask: "What Is 'puppy love'?" Is it, by any chance, particularly different to that "overwhelming, passionate, death-defying, soul-inspiring, God-given LOVE" which leads Horatius Ebenezer Buncome to ardently woo and espouse (Church ceremony at High Noon, ushers, maids of honor, wedding breakfast, 'n everything) Euphanasia Arabella Bugle; the happy bridegroom being at the time of said nuptials thirty-one years of age and drawing down $4,000 simoleons per annum, and the bride (blushing beautifully behind her veil) confessing to (say) twenty-two summers, and her fond father to a bank account of around $50,000?

Are we to believe that the LOVE of John Augustus and Horatius Ebenezer differs in QUALITY? Are we to assume that Elizabeth is "off color" and Euphanasia Arabella a flawless calla lily?

If, by any chance, *you* are inclined to think along those lines, let me beg of you to oil up your mental machinery, pull up the shades, remove the amber goggles and face and deal with FACTS squarely. When it comes down to LOVE, it is more than likely that the "puppy love" of John and Elizabeth was stronger, cleaner and generally more comformable with Nature's law than that of the other couple. That the one pair transgressed the *social* code and started something which they would (under existent circumstances) find it particularly hard to finish satisfactorily, is true; BUT, that they acted, as in the scheme of things they were intended to act, is also an incontrovertible fact. We may as well admit that here in the beginning. Now, unless you were born unlucky or hydrocephalic (or had some other regrettable deformity) YOU ought to know *something* about what is PUPPY LOVE, yourself. Perhaps, however, you have tried so many other varieties and have grown so dead to real and spiritual things, chasing after the material, that you can't focus correctly any more. If that be the case or if you find yourself incapable of "looking backwards", drop the matter here and let us who have lived —and are still living—talk straight talk. It's time for it.

For the present, we will consider the word LOVE as descriptive of that emotion which makes the male of the species lose his appetite and spend countless hours fixing his hair and arranging his tie because of the existence of some particular female before whom he would shine. It is the great primal driving emotion which has made ordinary men great, cowards heroes, and turned natural drones into pioneers. It is the marvelous compelling power which has made a few good women bad, a host of more or less bad women good, and millions of ordinary women mothers and angels on earth. It is more potent than hunger, more cruel than thirst, and more beneficent than sunshine! Where there is LOVE, anything is possible; where it is not, there is a vacuum—and Nature abhors that.

Love of this kind, as we know, makes its appearance only after the male or female has attained a certain age; but it comes surely, then. In this climate and in our race, normal sexual characteristics may have developed by the fourteenth year, and very rarely indeed are they delayed beyond the fifteenth. Everybody really knows this, and most people have read one or more reasonably informative books on sex subjects. "What a Girl (Boy, or Mother) Ought to Know," and similar said-to-be enlightening books have been printed by the tens of thousands. And, yet, strangely enough, not one parent in a hundred seems to realize the fact that a terrific, soul-consuming, heart-breaking (to him or her) LOVE for some member of the opposite sex may have complete possession of some maturing or just matured member of their own family! If they did understand the condition, they would—ten chances to one—not know how to deal with it! Most parents that I know today tolerate or even talk "sweetheart stuff" (which is bad taste anyhow) with very young children; they let their girls and boys see pictures in which the actors run the whole gamut of passion, and read books which would make St. Anthony himself wiggle a bit. They discuss the last savory scandal openly at the breakfast table and wonder cheerfully where the next triangle will turn up. They seemingly simply cannot believe that *their* offspring can cease being neuter and experience those sensations and desires which (presumably, at least) caused their existence. Like ostriches, they hide the head of their own experience (singlar or plural here, as you may prefer) in the sand of stupidity and expect their offspring to eat mustard and remain arctic puddings. Doesn't the LAW place the "age of consent" for the girl at sixteen, and can a boy marry till he is twenty anyhow and earning at least enough to keep his wife in house-dresses? With the careful training they are giving (or will give) THEIR children, nothing like sex disturbances is going to occur for several years. "Oh fools! Oh blind!" The disturbance *is* occurring even while you look inanely on and—did you but know it—both John and Elizabeth think (perhaps with good reason) that they

know a whole lot more about such matters than you do!

Anyhow, they are experiencing sensations that you seem to have forgotten, and it is pretty hard to convince them that all the extremely delightful procedures they see portrayed and read about are to be *seen* or *read about* only. Further, if Mother raves about "the Sheik" and his "masterful love tactics" (Father usually doesn't), and *Pater familias* himself is found with slippers on, in the evening, breathing deep and perusing "Three Weeks" or one of the more recent and still more highly paprika'd masterpieces of sex literature, why should it be so utterly wrong for their palpitating young to experiment a little bit?

Moreover, have they not read in school of the early settlers who married young and raised families while still in their teens? Is it not possible, moreover, that their own Grandma was a bride while still in short dresses? Are they not hearing all the time that the World today is run by YOUNG people—that youth will be served (IT WILL—but, sometimes, the service is extremely rotten), and don't they see other young people having wonderful "heart affairs"?

Let us grant all this—as we must—and we shall see that it is quite possible for the modern male and female of fifteen to contract LOVE ("puppy love", if you please) quite severely enough to cause them to do the one thing which always has been done under such circumstances, if the slightest opportunity offered and the inhibitions were removed, i. e., fly into each other's arms!

Some don't fly as far as others; some fly so silently that no one is the wiser, and some try their wings only to find them entirely unreliable, and come down with a horrible bang! The minority don't dare to fly at all till parentally urged, and a lot of these grow up to be reformers, agitators of some sort or another, or just plain bores. This class does not interest us now.

What we are concerned with, is the fact that a healthy girl may be a woman with every womanly instinct (but no inhibitive common sense) at fifteen or even earlier and that a boy may have the mating instinct well developed at the same age. In the past, the influence of the church, a *real* family life, and a generally wholesome moral atmosphere enabled young people to get along fairly comfortably. They saw each other under safe and sane conditions, had periodical kissing-game parties (supervised) and "sweethearted" in approved fashion. When a girl or boy began to show distinct signs of being "in love", they were given certain opportunities to spoon, but they understood very distinctly that it was a case of "thus far and no further", and, as there was comparatively little to excite them and dire disgrace was sure to attend discovered indiscretion, they remained discreet—at least, we have their word for it that they did. I am sure WE were; and we shouldn't be conceited enough to think we were better than other people.

But, if a boy and girl did run off together, then they were married and the parents saw to it that he went to work and brought home the bacon, even if they had to supply the beans! I have heard of such couples getting along (with a little help from fathers and mothers) very nicely on twelve dollars a week, and I still occasionally hear from one man who married at sixteen and earned ten dollars a week, who is now worth so much that he has difficulty in making out his income-tax return. He also has trouble keeping his children from ruining him.

Today, our girls and boys mature, if anything, a little earlier than they used to and, when they do mature, they Do. Moreover, what they don't know about what they now are beginning to personally experience isn't worth knowing. They have been undesirably educated along sex lines. Their grandparents at their age were not so at all and their parents not quite so thoroughly. Conditions have decidedly changed,—and the youngsters themselves never tire of informing protesting elders of that fact.

The church, I am sorry to say, has lost a great deal of its old-time influence. Most of those churches which are at all popular have had to make very great "concessions" and very, very many have had to add all sorts of amusements (even movies) as an inducement to membership. The "Family", as such, it seems, is dying out. As a very clever woman writer expresses it, "A number of self-conscious people with diverse interests merely sleep and eat under one roof."

Father works hard to keep that roof overhead and, not infrequently, spends such other hours as he is not sleeping in "playing around." And it's not always *golf* that he plays, either! Mother has *her* interests and simply MUST keep up an appearance of youth; so, it ill becomes her to jump too ferociously upon daughter when she "dolls up" to excess. Moreover, if the Smith girl (who isn't half as stylish as hers) goes to three parties a week and has somebody always coming around to take her out in a swagger machine, how CAN she forbid Elizabeth to go the same pace? "Young people in these days have such GOOD TIMES and are so

independent!—What can one do?" Under such circumstances, Hope, Pray and—sooner or later—Pay the Piper. That's all!

But, don't sneer at the "puppy love" which, too early, results in the selection of *one* girl and an elopement. Such an occurrence unhappily is, for a hundred obvious reasons, most deplorable; but the objections rest chiefly upon economic and social grounds. The fact, that the two love enough to elope, evidences real LOVE—the love which will, if properly directed, make the boy speedily into a real MAN—one who will provide for and protect his own. Moreover, such a LOVE usually lasts.

Sneer, rather, at (and smite also) the "petty-party" advocate, the fellow who takes 'out a different girl every few nights; the rotter who boasts that he never asks a girl to go riding a second time if he can't kiss her the first trip; at the unmitigated blackguard of eighteen who, after a drink or two of hootch, brings out a little memorandum book and counts up the number of girls he has been intimate with. Make *your* boy realize that, what he does to other girls, other fellows are going to do to his sisters, and get him to so live himself that he can, if occasion arises, look any such cad in the eye and then smash his face with a clear conscience! Make your girls understand that LOVE is a wonderful thing—whether of the puppy or more mature variety—but that *love*, as usually offered in the taxi, touring car, roadhouse and on the bathing beach, is something to fight shy of. *Talk to them;* run the risk of being told you are "out of date," and get them to really and truly understand the sanctity of their own bodies; the danger (to them) of the delightful palpitations which they will most certainly experience (unless they need a doctor's attention) and, if they *must* see salacious pictures and read inflammatory books, let them know the other side of the story—Be very explicit about THE PIPER WHO HAS TO BE PAID! The LOVE of the puppy is a thing to be reckoned with.—It is not *always* permanent, perhaps, but it *is* the genuine thing, and some of us are inclined to doubt whether any Love ever equals in intensity the first attack. BUT the "love" of a great number of the modern *jeunes chiens* is something entirely different—is, indeed, about what the dog has to offer—And parents must guard their daughters particularly against that sort of love!

In my humble opinion, instruction upon sex matters in the public schools will, for a long time at least, do more harm than good. You simply cannot get rid of the personal equation here and, while Johnny or Mary might alone take the facts properly, the subsequent influence of Thomas and Katrina might make them snigger and investigative. I have asked several high-school pupils, of both sexes, how such subjects are generally regarded, and am compelled to confess that their answers were far—very far—from satisfactory. What we have got to recognize, is the fact that the moral scale HAS BEEN lowered; that those who have recently matured or are maturing under our supposed guardianship, look very lightly upon things not so long ago *taboo*, and, moreover, that they already *know* pretty nearly everything from propagation to the prevention thereof, and don't hesitate to apply the knowledge.

There is a distinct danger of teaching the young *too* thoroughly and at the wrong time. Some people are "good" because they have no desire to be "bad"; others because they have early and consistently been taught the difference between Right and Wrong, and still others because they are afraid of the possible (or certain) consequences of Wrongdoing. Fear is a powerful inhibitive agent and, Alas! in this connection, "*perfect* knowledge casteth out fear!" As a parent, I would say, our *jeunesse dorée* are entirely too well posted. As a physician, I am sure of it!

The only "sex talk" which, in my opinion, will do any real good in the "teen" age is the heart-to-heart talk of father to son, and mother to daughter—and in a great many cases, at least, father can tell the girls a few things which mother may not like to mention and which will open their eyes considerably. Those parents who find themselves unable to perform this very essential duty had better call upon the family doctor and let him do the best *he* can.

Under any circumstances, it behooves Mother and Dad to behave themselves, keep a little closer to their offspring and remember that their "puppies", like "yumpin-yiminny-Yupiter Yenny", *can* LOVE—and, it's "the thing", these days, to do it early!

Let's Talk it Over

Acute Otitis Media—Non-Purulent and Purulent

DISEASES of the Middle Ear constitute about two-thirds of all aural maladies and do not receive the attention at the hands of medical practitioners that the condition demands. This is perhaps due to the frequency with which it is encountered, especially in children suffering from acute infectious diseases, where the involvement is only slight and the manifestations are obscured. This laxity of the medical practitioner is reflected in the attitude of the laity, who have come to regard it as of little consequence, and this ignorance has prevented a very great number of cases from obtaining medical aid until considerable damage has been done. I therefore bring to your attention Otitis Media in its acute, non-purulent and purulent forms, together with some methods that have been successful in the early treatment of these conditions.

Simple Acute Otitis Media, or Acute, Non-Purulent Middle-Ear Catarrh, is a direct extension of a nasal or postnasal catarrh along the tubal portion of the eustachian tube which becomes hyperemic and swollen, and a clear serous or viscid fluid is secreted in varying quantity within the tympanic cavity.

Etiology: The exciting cause in nearly every case is an acute nasal catarrh "a cold in the head." Other causes are the exanthemata of childhood, influenza, syphilis, etc. The chief predisposing causes are adenoids in children and nasal obstructions in adults. The pathological changes vary with the intensity of the catarrhal involvement. The swelling of the mucous membrane blocks the lumen of the eustachian tube and the middle ear is converted into a closed cavity. The air within is absorbed, the tympanic membrane becomes gradually indrawn from atmospheric pressure and an exudation of fluid takes place, to compensate in a measure for this loss of air.

Symptoms: Pain is rarely present, except in young children and infants. It is not severe and is usually complained of in the region of the tonsil, due to the involvement of the tubal portion of the eustachian tube. There is a feeling of fullness in the ear. Deafness, which may not be apparent, gives great discomfort to the patient. It varies often with extreme suddenness. After eating or blowing the nose, he may hear a "crack" or a "crick" in the ear and deafness may be diminished or temporarly disappear. These changes are due to the eustachian tube being at one time patent and at another time occluded by the swollen mucous membrane or by a plug of mucus. Adults complain of a buzzing or singing in the ear with a feeling of pressure within the head (tinnitus). Another annoying symptom is caused by the movement of the fluid within the tympanic cavity, altering with the varying positions of the head; deafness being worse in the recumbent position. There may be an increased resonance of the voice in the head (autophonia) so marked that the patient imagines he is talking very loud. Non-purulent catarrh may affect one or both ears, but the affection of one side usually precedes that of the other.

Examination: Simple tests of hearing should be made for the purpose of estimating the amount of impairment present and to determine if it is due to affection of the middle or internal ear.

For practical purposes, the "whisper test" is sufficient unless the deafness is extreme. Whispering can be heard by the normal ear from a distance of twenty-five feet. Patients suffering from middle-ear catarrh or obstruction of the auditory canal can hear the high pitched words or tones better than the low pitched. The lowest tone is R and the highest S. For high tones, words such as six, sixty, sit, ship, sailor, house, etc., are heard well in middle-ear deafness and badly in nerve deafness. The reverse is the case with words like five, fifty, rob, robber, bug, brother, rug, etc. The distance at which the words are heard should be noted to determine whether improvement, after treatment, has been made. The patient should be seated with the ear to be tested toward the examiner, the other ear stopped by the patient inserting his finger within the external meatus. Each ear should be tested separately. The examiner should

stand at the extreme distance and gradually approach the patient until he can promptly repeat the words. Other tests familiar to the examiner may be tried if he so desires.

The Tympanum: The early examination of the membrana tympani in acute diseases, especially in children, is most important. Acute otitis in young children is very frequently overlooked, due perhaps to the indefinite manifestations of the disease. It should be adopted as an axiom that no examination of a sick infant is complete until the condition of the middle ear is fully determined. An ear speculum with a lamp lighted from dry cells will be found most convenient and can be easily carried in an emergency case. The appearance of the tympanum varies with the duration of the disease and the examiner should be fully conversant with the anatomy, topography, and appearance of the normal membrane.

There may be no appreciable change in the milder forms of the disease or if the drum is thickened from a previous attack; but, usually soon after the onset, the tympanum presents a reddish tint from injection of the vessels along the malleus and at the circumference. If the trouble has existed for a few days, the membrane is retracted and appears dull and sodden, and the cone of light is distorted. Injection, especially along the malleus handle, is definite. In cases of serous effusion, the exudate may be seen within the tympanic cavity and its level recognized by a fine line of demarkation. The fluid may be seen to change in level with the movements of the head. The color of the membrane below the level of the fluid is usually darker. If the whole of the cavity is filled with fluid, there is often a slight bulging at the upper and posterior quadrant of the membrane.

In all cases, before making an aural examination, the canal should be syringed with warm sterile water, all obstructing cerumen and débris removed and the drum dried by brushing with cotton tipped probes.

Rupture of the drum does not take place in uncomplicated cases of non-purulent otitis media.

It should not be lost sight of that there is, in children, a varying amount of adenoid tissue around the pharyngeal opening of the eustachian tube and that the swelling of this tissue is frequently the cause of middle-ear catarrh apart from either enlarged faucial tonsils or post-nasal adenoids. This adenoid tissue may persist into adult life, especially if once infected, and mechanically obstruct the eustachian tube and affect the hearing.

Treatment. The treatment of acute catarrh of the ear should be directed to an effort to prevent further damage to the tympanum, to repair if possible what harm has already been done and to remove the cause. Good results will be obtained from the introduction into the auditory meatus of a few drops of a warm (about 100° F.) 10-percent solution of carbolic acid in glycerine, repeated two or three times a day. Care must be taken to insure the drops coming into direct contact with the drum. The patient should be in the recumbent position, with the affected ear uppermost.

This condition is called non-purulent middle-ear catarrh, owing to the absence of bacterial organisms in the exudate. It is nevertheless caused in the majority of cases by bacterial conditions elsewhere, such as, acute and chronic nasal catarrh, enlarged tonsils bacterially infected, etc. It is therefore a wise and safe procedure to administer a vaccine containing organisms known to be present in these underlying conditions. The result obtained will justify the wisdom of the treatment. Stock vaccines are eminently satisfactory. I have had excellent results wtih the following mixture.

Friedländer's Bacillus	300 000 000
Micrococcus catarrhalis	200 000 000
Streptococcus	100 000 000
Pneumococcus	100 000 000
Staphylococcus aureus	200 000 000
Staphylococcus albus	200 000 000

The dose I prefer is, for infants and children, 5 to 8 minims and for adults 8 to 10 minims, repeated at one- to three-day intervals. Rarely will more than three doses be necessary. It is important to see that the bowels are moving freely; calomel in divided doses followed by the morning saline may be necessary. In infants, castor oil is an efficient remedy.

The tympanum should be inspected daily and, if an acute purulent otitis media does not develop, the catarrhal condition will subside and the congestion of the drum will be found to have diminished.

Inflation: In order to restore the patency of the eustachian tube and to remove the secretion still existing within the middle ear, also to obtain free ventilation, it is necessary to employ one of the methods of inflation. Politzer's method is usually sufficient but, in adult patients, if the physician is skillful, the catheter method may be employed. It is safer, however, to wait until the existing nasal and postnasal catarrh has subsided before attempting inflation.

(Paracentesis, as soon as fluid is detected in the tympanic cavity, is advocated by some as

the logical method to ensure drainage and ventilation, but I have never found it necessary to resort to this radical measure in non-purulent catarrh.)

After inflation, the hearing should again be tested and the improvement recorded. The improvement varies in amount and in the length of time it lasts. This depends upon the character and amount of catarrh present. If the mucous membrane of the eustachian tube is thickened from previous attacks of catarrh or the secretion is very viscid, there may be little if any improvement at first. As a rule, inflations are necessary every day for the first week and every second day for the second week; afterwards, the frequency is dependent on the length of time the improvement lasts. In a considerable number of cases, inflation will be unnecessary owing to the complete absorption of the secretion and the subsidence of the tubal swelling having restored hearing.

If this treatment is followed, non-purulent middle ear catarrh is cured in from one to six weeks, if the patient is otherwise in good health and the cause of the catarrh is due to some temporary condition. If the catarrh is secondary to some nasal or post-nasal condition such as polypi, atrophic rhinitis, hypertrophy of the faucial tonsils, adenoids or adenoid-tissue growth about the tubal orifice of the eustachian tube, the recovery depends on whether these conditions can be cured.

Acute Purulent Otitis Media

Acute Purulent Otitis Media, or Acute Inflammation of the Middle Ear, is distinguished from the former type by the presence of microorganisms in the exudate and by the excruciating character of the pain in the affected ear.

Etiology: The inciting cause of purulent middle-ear disease is the invasion of the middle-ear cavities by various microorganisms. The source of these organisms is in the infections found in the nasal and post-nasal areas, especially if associated with adenoids or nasal obstructions, or from the entrance of fluid through eustachian tube, from bathing or from douching the nose carrying with it bacterially invaded mucus. Infection may also reach the middle ear from wounds in the drum or through the extension of external infections. The bacteria which are most commonly found in the exudate are pneumococci, staphylococci, streptococci and influenza bacilli. The predisposing causes are, infectious diseases, such as measles, typhoid fever, scarlet fever, diphtheria; obstructions and deformities of the nasal and post-nasal spaces.

Pathology: The mucous membrane of the eustachian tube becomes swollen and thickened and the hyperemia extends to the tympanic cavity and the mucosa lining the membrana tympani; as this proceeds, there is a profuse and rapid flow of purulent exudate which may fill the tympanic cavity and aditus and finally reach the mastoid cells.

Symptoms: There may be a short prodromal stage during which the ear feels full and the patient complains of a chill; but the disease usually begins with sharp paroxysmal or pulsating pain in the ear which may radiate up the side of the head and down towards the neck and teeth. It is aggravated by crying, coughing or eating and is frequently accompanied by a rise in temperature.

Convulsions are not uncommon in young children. Adults complain of tinnitus and vertigo. Deafness is rapid in its onset and is well marked. Generally, the whole tract of the middle ear is affected; but sometimes it will be found limited to the attic. One ear only may be affected but, if the trouble occurs as the result of measles or scarlet fever, both ears become involved. There is rapid subsidence of the pain and pyrexia as soon as rupture of the drum occurs.

Examination: The speculum will disclose a highly congested and swollen membrana with absence of light reflex. Bulging over the whole or a part of the drum may be present; in some cases blebs are seen in the layers of the drum membrane. If rupture has taken place, it may be seen as a small irregular opening. The outlines of the drum are sometimes difficult to make out, owing to the desquamated epithelium which covers it. Later in the course of the disease, the bulging may be distinctly seen and the membrane present a yellowish tint from the pus lying behind it. The otorrhea usually begins in from one to three days after the advent of the disease. Severe pain with intense redness and bulging of the tympanum are characteristic.

Treatment: The relief of the excruciating pain is the first consideration, and the instillation of warm carbolglycerine in 10 percent solution will usually promptly relieve it and also reduce the congestion and inflammation of the drum.

The value of vaccines in the treatment of this condition cannot be too strongly emphasized. When used early, the fever rapidly declines, the congestion and inflammation of the tympanum is promptly reduced, the pain disappears and that much dreaded complication, mastoiditis, is practically unknown. A stock mixture containing the following organisms

should be given in the acute stage:

Pneumococcus	200 000 000
Streptococcus	200 000 000
Staphylococcus aureus.	300 000 000
Staphylococcus albus ..	300 000 000

The dose is from 3 to 5 minims for children and from 5 to 10 minims for adults, given subcutaneously. It may be repeated in from 12 to 36 hour intervals. Rarely will more than three doses be necessary. If, when the case is first seen, the active symptoms have subsided, the mixture known as "Catarrhalis combined" previously referred to can be given with excellent results.

Paracentesis: As in all suppurating conditions, the establishment of drainage is the logical procedure. It is indicated in acute purulent otitis media when the tympanum is filled with pus with no avenue of escape and the membrana tympani is congested and bulging. If rupture has already taken place, the opening is usually too small for effective drainage, and it is necessary to enlarge the opening.

Like any other surgical procedure, incision of the drum must be done under aseptic precautions. The external auditory canal is thoroughly cleaned by careful syringing with a warm solution of bichloride, 1:3,000, and dried by wiping with cotton-tipped probes. The application of 10-percent carbolglycerine solution to the drum will deaden the pain considerably but, unless the physician is particularly dexterous, a general anesthetic should be given. It is not necessary to produce deep anesthesia. The incision is made with a paracentesis bistoury through the membrane in a crescentic shape parallel to the posterior periphery of the membrane. If the drum has already been ruptured, it is often necessary to enlarge the opening, both upward and downward, in order to establish free drainage.

The ear is now cleaned, either by careful irrigation or by mopping with cotton-tipped probes. A small gauze wick is inserted for drainage and the canal is filled with a warm 1-percent solution of chlorazene (Abbott). A large pad of cotton is applied and retained in place by a bandage. The patient is placed in bed where he is kept for several days. The canal should be kept filled with the solution every three or four hours for at least 24 hours after the operation, and the pad of cotton renewed as often as it becomes saturated. Sometimes, considerable neuralgic pain develops after an incision of the drum. A tablet containing acetphenetidin, acetylsalicylic acid and caffeine will usually give prompt relief. Free movement of the bowels should be secured and the diet restricted while the patient remains in bed.

The wound in the membrana tympani should be kept open until the otorrhea has stopped, and the auditory canal kept clean by mopping or, if the discharge is profuse, by irrigation.

Inflation should be done daily after the operation, but not until the acute inflammation within the tympanic cavity has subsided. After the otorrhea has ceased, it may be continued until hearing is restored. The frequency with which it is done is determined by the tests for hearing already referred to. Any malady of the nose or throat that may prolong the middle-ear inflammation should be remedied or removed. Operations on the tonsils and adenoids should be deferred until the purulent discharge from the ear has ceased.

In cases where vaccine is administered and paracentesis is done promptly, the acute attack terminates in two or three days and rarely continues for more than one or two weeks.

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[This lucid and full description of acute and chronic middle-ear disease is very useful to the general practitioner, who will find good advice for his own management of such cases. Also, it aids him in determining when a patient will be served better by being referred to a specialist. We hope that Dr. MacKinnon will favor us again with articles. Ed.]

IN OUR GRANDMOTHERS' DAYS
Being Almost An Autobiography

My own mother died very young, and I was turned over to my paternal grandmother who "raised" me, for several years, according to the methods in vogue for rearing children at that time and among that people. When I was about eleven, my father married a second time and I was taken to his home; and my stepmother, who was of the same general type, completed the job my grandmother had so successfully begun. To the fact, perhaps, that I am a perverse and naturally contrary sort of person, with some degree of physical resistance, I owe the fact that I am alive today, for, had I been otherwise, it is morally certain I had not survived the "raising" process of those two excellent but misguided women.

As I go up and down the fables of memory, today, nearly half a century later, I still find many things popular that were so in my grandmother's and my stepmother's day. There is the same blissful ignorance of matters

hygienic, the same criminal cookery that marked my early life. True, there is some improvement over what it was at that time, but it is equally true that there is still great room for improvement. This little sketch is not written to lay down any set rules either for personal hygiene or for better cookery, but solely in the hope that I may be able, under the guise of the story of a little country boy's life, to point a moral.

My remembrance of my grandmother is, that she was a tall, angular Scotch woman reared in Virginia, of the poorer type of settler. She was severely practical, a strict Calvinist; one who deemed it a sin against the Holy Ghost for children to enjoy themselves on a Sunday; one whose rule for children at table was "let your victuals stop your mouth." In her narrow way, she was just to children, but she had but little natural love for them.

My mother, before she died, was a delicate, refined little woman, illy fitted to withstand the knocks and buffets of this uncharitable old world. She had been reared in a home somewhat approaching to luxury, and the transformation to one of almost poverty must have been irksome. Even though the wolf of Poverty hovered always at the door, I remember that everything about the little home was spotless, neat and clean. My first recollection is of a sweet-faced woman giving me a bath in a washing tub, then, in the whitest of white garments lay me away for an afternoon nap in the whitest of white cribs. Then all changed. The little mother grew listless and pale, fading from day to day. I recall perfectly the day they carried her from the big armchair to the bed from which she never arose. I remember, too, following the hearse to the old church yard, where they laid her to sleep the eternal sleep.

Then a jolting wagon trip of several days to a distant part of the state, and a double log cabin. The cabin stood in the edge of a dense forest of oak and had two rock chimneys, one at either end, and a covered passageway between. There were several half-windows, but I do not recall ever having seen one of them open, summer or winter. This was to be my home for several years.

That first night! If I live to the end of the century, I shall never forget the horror of it. When night came, I was put to bed with two of my younger uncles, in a close airless attic, where the smells from the kitchen battled with the odor from innumerable bunches of dried "yarbs" suspended from the ceiling, where no ray of God's blessed sunlight was ever allowed to penetrate, on a bed of goose feathers. Now, if the evil genius of disease has one engine more effective than any other for the spread of tuberculosis, I think, the feather bed of our grandmothers' is that engine. And how they clung to it! If the house burned down, the first thing to be salvaged was the precious feather bed; if the sheriff came to foreclose a mortgage, grandmother defended her feather bed against all attempts at seizure. From year's end to year's end, the fluffy mass reposed on the old four-poster, impartially gathering the body emanations of innumerable sleepers. The coverings were of fantastic designs quilted by the neighbor ladies who were called in for a "quiltin' ", and were just about as sanitary as the feathers they covered. I shall always remember how my tired little body sank into that yielding mass of down. I screamed with fright, for I was sure I was sinking through the floor. When my uncles came to bed they each burrowed down into the feathers like puppies, and drew the covering over their heads, covering mine at the same time. I was smothered and too frightened to move. It was a night of terror. I had never been in bed with another person and it was months before I became accustomed to it, or to the hot, stuffy room where we slept, and to the mass of feathers that seemed always waiting to swallow me up.

My grandfather was a silent, rather morose man who always seemed to have missed his calling in life. He died several years later of cancer of the stomach and, when I reflect upon the cooking that grandmother provided him with, I am surprised that he survived as long as he did. I believe, I mentioned it before, but it will do no harm to repeat it, that cooking was a crime. There should be some effective criminal legislation to punish a person who takes good wholesome food and abuses it as they did in those days, and still do for that matter. Our menu consisted largely of fried pork, fried potatoes, dried apple pies, corn bread, sorgum molasses, fried eggs, and various garden truck in season. This fare could have been made palatable and even nutritious, had not grandmother insisted upon frying everything that was fryable, even to the dried apple pies. I am not drawing an exceptional picture. All the families in our neighborhood at that time were just like that, and doubtless still are. Right there, from the time I was five years old until I was eleven, I laid the foundation for a dyspeptic pessimism that has tinged my otherwise sunny disposition. Of course I realized, though only in a vague way, that things were wrong. They were different from the home I

had left; but, how different, I could not make out in my childish mind. Gone forever were the dainty little lunches of appetizing food that my own mother used to prepare for me; gone for aye was the sunny little bedroom where I watched the shaft of summer morning sunlight filter through the white curtains. Gone, all gone, to give place to culinary efforts that were relics of the cave man, the sunny little room replaced by the dark attic and the smelly feather bed.

Fortunately, childhood does not really *feel*. It just exists, and uncomfortable things in life leave only slight impress. My good grandparents were doing what they had done and were doing for their own, neither better nor worse. I was expected to grow up on the same fare and fight my way against disease by the same methods. It was a primitive, almost savage, state of society.

Then came my father's second marriage. I was grown to be quite a lad by that time. It was midwinter and very cold. They called me in from an outhouse, where I spent the most of my time, and introduced me to a woman, several years my father's senior, as his wife and my new mother. She was a spinster when my father married her, and had never known the joys and sorrows of motherhood. Her knowledge of children was not great, and her sympathy with them less. That afternoon, I was bundled into a sled and taken to my new home. Never was there such an homecoming for a lonesome boy. I can still visualize the open fireplace, with two aged people, my new mother's parents, sitting on either side of the fire. Both these old folks were smoking particularly black and smelly clay pipes and spitting impartially into the fire. Thank God! I had been spared that at the other place. In front of the fire, lay a yellow cur dog and a large black Maltese cat. There was mighty little room left for a cold little boy, and all the years that followed the room never seemed to increase.

Here, as at my grandfather's place, I was forced to sleep in the inevitable feather bed. It was placed in a gable room up a steep, dark and cold stairway, with innumerable cobwebs and dried wasp nests clinging to the rafters overhead. It was less unpleasant than the former had been, with the added advantage of my being permitted to sleep alone. It is a crime to compel children to sleep two or more in a bed; yet, this is a custom prevalent among nearly all classes of society. It is just as easy to have separate beds even though lack of space may necessitate their being placed in the same room. My first perverted knowledge of matters sexual came from sleeping with an older cousin.

There was a family living just across the road and one of the older boys was a victim of tuberculosis. He was not yet confined to his bed and spent most of his time at our house sitting before the fire. His home must have been less pleasant than ours, if such a thing were possible; for he came early and remained late. I still recall with deep disgust the filthy habit this young man had of expectorating in the general direction of the fire, totally regardless of whether the sputum reached its destined mark or not. More frequently it did not, but lay there slowly disintegrating in the heat, a menace to every person who came near it. Afterward, in this community, I saw many tuberculous persons. For, owing, to their ignorance of hygiene, many were afflicted, and I noticed that, almost without exception, they were blissfully careless of the comfort and well-being of persons with whom they came in contact. I find, too, in my professional career, that I am compelled to keep my tuberculous patients on the *qui vive* all the time to prevent their treading on the rights of others. This, I fully appreciate, is not true of all consumptives; but it is largely true of the class with which I come in contact. It would seem that there is something in the bacillus tuberculosis that generates some sort of ptomaine in the blood rendering the patients careless of themselves and of others.

The two who sat on either side of the fireplace died one winter, within a very short time of each other. Summer came, and the tuberculous young man forsook our fireplace for the shade of the trees in his own yard. Then I missed him one day and, after a few more days, they hauled all that was mortal of him away. Things ran along monotonously in that community, as things have a habit of doing in communities where there is no intellectual life. Just the sordid grubbing for the bare necessities.

Another winter came, and I was grown into a tall ungainly boy, all hands and feet. That winter, I began to feel a strange lassitude. I was always tired. My stepmother dismissed the matter by saying, "Oh, he's just growing too fast." It was two miles to the district school and, often, I found myself sitting down halfway on the journey to rest. I had a "cold" that persisted in remaining, despite all the home remedies, ranging all the way from lobelia to boneset tea, that were poured into me. One night, I overheard a conversation between my

father and his wife which it took me years to comprehend. It was regarding my condition and a trip to the west by wagon team. Early in February of the next year, it was decided to make the move. A sale of all the household things was cried and, when the first leaves of spring were budded, we set out on our long journey toward the sunset. All through the hot summer, we toiled across the sandy plains, defiled through the gateway of the Rockies, crossed the Pacific plains and, finally, in October, came to a halt at a sheep ranch in eastern Oregon. All this time I had been growing stronger. My old enemy fled before the strenuous outdoor life and, when we reached the Oregon ranch, there was not a trace of the old lassitude, no vestige of the old cough. That however, is another story [which, we hope sincerely, Dr. Moody, will relate to us, soon.—Ed.]

Charles Stuart Moody.

Menan, Idaho.

IN THE LONG-AGO

I have read Dr. Bryce's letter in the November issue of The American Journal of Clinical Medicine, with great interest and also the editorial, "The Days of Laudable Pus". I have never seen quite what Dr. Bryce has, because I have not had the opportunity; but I have seen and done things which were successful and which the modern practitioner would frequently fail to appreciate. Surely, our overutilized germ theory fails to explain many of them satisfactorily. A brief example or two.

I took care of a dozen cases of confinement in the slums of London, in 1871, and they all got well. There may have been complications in more than one instance, but the patients all recovered and there was lots of dirt and no antiseptics.

I have taken care of many cases of peritonitis, due, no doubt, to perforated appendicitis in most cases, but there were relatively few deaths with other than opiate treatment and, surely, not more than now, with our good surgery. The patients did not recover as rapidly as when operation is performed as now—that is all. I have taken care of many cases of suppurating ears, with leeches and douching. They got well, usually, and, in scarcely a single instance, was there any need of operation for mastoiditis or incision of the drum membrane. I have given many, many hypodermic injections and did no preliminary washing. There were no abscesses and indeed no bad results at all.

I have yet to see cases of transmission of tuberculosis. I doubt that it occurs. [Oh, Doctor Robinson! Heresy!—Ed.] I had several assistants at New York Hospital, in the outdoor department, where I served thirteen years and in a small dark room, never disinfected or properly cleansed, where we took care of very many tuberculosis cases in all stages. Neither I nor anyone of my assistants ever acquired tuberculosis, and some who had it go well in city surroundings, in crowded, unsanitary rooms. They were all given judicious medication with codliver oil and the hypophosphites or creosote properly given. Of course, some, not to say many, died. The latter, some of them at least, would have died anywhere. Such is the outcome of the disease. In a fair proportion of cases, it is self-limited, as shown by the late Dr. Austin Flint and others; in a greater proportion it goes on rapidly or slowly, to a fatal termination; this in spite of all changes of treatment and climate and in spite, alas, of all that modern science can do for the poor sufferers. I use the word "poor", not to mean pecuniary means but simply as considering sufferers from tuberculosis in this class, no matter what wordly position they have.

Beverley Robinson.

New York City.

[Doctor Robinson is too good a clinician to wish to have it inferred that he deprecates research and progress. In fact, we know that he is in cordial accord with all progress that actually offers something better. Also, he understands that those consumptives treated in ill-ventilated rooms and living in unsanitary quarters did not recover because but despite these unfavorable conditions. The fact that he and his assistants escaped the consequences of infection, is explained today with that magic expression: Resistance. Not, that we can define the term or say clearly what it means. Still, it can not be denied that there is such a thing—whatever it may be.

Doctor Robinson's purpose in writing this letter (for the publication of which he has kindly given permission) is not so much to discourage study, advancement, progress; but, rather, to warn against throwing overboard that of the old-established that is good and has stood the test of time. Modern theories do not explain all our puzzles. With new discoveries and attainments, new problems, new riddles arise; and, those who come after us will offer still newer methods of treatment based upon still newer theories and hypotheses.

All of this is as it should be. Without new theories, there can be no new results. Stand-

ing still never gets us anywhere. If that be slang, make the most of it. It is true. However, it does not do to discard indiscriminately the Good old methods without a mighty strong reason. In so far, we agree with our good friends, Dr. Robinson and Dr. Bryce, who would be the last to have us stand still.—Ed.]

A CASE OF EPILEPSY

I had an interesting experience this morning and, to me, an unusual one. I am jotting down the high spots in the case, and hope that I have been brief enough not to bore you. I have been much interested in the articles by Doctor Tracy and others on epilepsy, for the reason that this letter explains.

Mrs. S., patient, thirty years of age. Now married ten years. Eight years elapsed before her first child was born. Then, four births in rapid succession; youngest, eighteen months; oldest child, now six. Barely one and a half years between births.

Shortly following the last birth, she began having epileptic seizures which steadily increased in number and severity till the time she came into my hands, at which time she had eight seizures in twenty-four hours.

She had appendectomy performed as a sure cure—failure. Then curettment; failure again. Finally, an operation unique in surgery for the relief of epilepsy. "The head of each ovary was cut off; the fallopian tubes were severed and the ends tucked in, that there should be no possibility of a recurrence of pregnancy. Then the prolapsed womb was drawn up and stitched to the abdominal wall." Notwithstanding this marvelous feat of surgery, the woman menstruates regularly and copiously.

Following this failure, saturation with bromides to the extent that bromism was very marked. The patient had the stolid features of impending epileptic insanity, irritable, memory almost gone, and at times would fly into a rage and beat her children unmercifully.

My treatment consisted of daily massage, with careful attention to her diet; daily high enema; reduction of quantity of foods until twenty pounds of excess weight was removed; medication for reduction of evident autotoxemia; triweekly cleansing of uterus from which flowed a continuous ropy discharge (laboratory analysis of which revealed no specific germs); a thyroid-iodide combination for reduction of an enormously enlarged thyroid.

Under this treatment, she improved rapidly in mentality, her customary joyous nature of former years returned, the bromide rash and other signs of bromism disappeared; the thyroid was reduced in size and an almost complete return to normal, of her sex organs, was established. At the end of two and a half months' daily treatment, we were congratulating ourselves on having worked a cure, when she had another slight seizure in the afternoon, followed by another light one that night. These were not more severe than a temporary swooning, but they spoiled the beauty of the picture for me.

I got some comfort from the fact that the attacks followed a complete ignoring of dietetic directions for the week previous, the revelations of the stomach tube bringing the confession.

I wanted to give up the case, but the husband would not allow it and promised rigid enforcement of my orders. Now followed almost three months more of success; and then a seizure, very light, following three retained meals in the stomach. One week of freedom, then three more light attacks—just enough to give the doctor the creeps.

Now, for the point that interests me, and perhaps you. During this period of nearly six months, I have made careful examinations of the heart and, of course, of the urine and blood; but found nothing of moment. She had two seizures, momentary in duration, yesterday. This morning she reported at my office for treatment and, while on my operating table, suddenly exclaimed: "Now, Doctor, I am having the feeling I have just before going into one of the fits."

I have had quite a number of these cases and, realizing how rarely one can be on hand when the aura is present, and hoping to hold her from completing the performance and yet go through enough of it to afford some knowledge of what was occurring in her particular case, I called to her: "You are not going to have a spell, for I can, of course, prevent it; but just point to the spot where you have the queer feeling."

She put her hand to the pit of her stomach and whispered, "There, I am getting dizzy and blind."

Quickly placing my hand over the spot, I almost yelled, "Stop! You have will enough to stop this fit. Take a long breath."

Her face had become ashen pale; but, as I rapidly manipulated the abdomen, I kept giving her suggestions, and my unusual angry tone of voice gradually had the effect to bring her to normal again.

The small end of the stomach had contracted into a hard ball. A vibratory movement seemed

to pass through the whole area and, then, a relaxation of the stomach. A rigidity next could be felt over the abdominal aorta (the patient having eaten nothing in twenty-four hours, the abdomen was easily manipulated and I could feel the outline of the parts plainly), then the pulse beat under my fingers became tumultuous, receded to normal, and the patient regained her normal condition. I seized my stethoscope, placed it over the abdominal aorta and was astonished to find a distinct bruit at each systolic beat of the heart. Many times' auscultating the heart had revealed no bruit and, now, on placing the instrument over the heart, no sound of such a character could be detected.

Since reading the article by Doctor French in the last "Clinic" (Oct.), which arrived just as I had reached this part of my article, I have gotten a little comfort in knowing that my failure to stop the last series of seizures may be due somewhat to an ulcerated tooth which has been bothering the patient for a week. At last, I have succeeded in having her go to have it extracted. I had previously warned her that a bad toothache might bring on a spasm, but she wanted to wait till she could have her brother do the work.

Now, I would like to have your idea of what that bruit means. Could it be an aneurysm, a stenosis of the celiac axis, pressure on the abdominal aorta by the knotted pylorus, or purely a functional spasm, or none of these? If it is simple as A.B.C. to you, please give me a lift.

F. G. de Stone.

Turlock, Calif.

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[In reply to this interesting account, we wrote the following letter to Doctor de Stone. Both letters are open for discussion which, we hope sincerely, will be general. The letter follows:

"Your letter describing the history of an epilepsy case, in a woman thirty years of age, has interested me greatly—mainly for the reason that I have in my care two young people, a girl of twenty-three and a young man of twenty-six, who had had frequent and severe epileptic seizures for ten and six years respectively and in whom I managed, in the course of several months, to reduce the frequency to once in one or two months, while the severity is markedly lessened. In the case of the girl, the immediate cause was a brutal fright. She wandered into the room in which the undertaker was busy with the body of her sister who had been killed in an accident. She ran screaming from the room, wandered around for several hours and soon after developed epilepsy, recurring regularly at menstruation time and frequently during the intervals.

"In the young man, the attacks followed (I am inclined to think) a severe attack of diphtheria at the age of twenty, which seems to have been treated by an excessive dose (or, possibly, by an insufficient dose—?—) of antitoxin.

"You see, Doctor de Stone, I have not done as well as you, in so far as I have not succeeded in eliminating the attacks altogether, even though they are greatly reduced.

"Like yourself, I note an intimate relationship between the attacks and dietetic errors, or, more correctly, intestinal autointoxication, clogging, etc. I have been strongly impressed with the fact that epileptics are gluttons. They are proud of their marvelous appetites and, unless restrained, will fill themselves indiscriminately with anything they like, while they are very apt to be constipated.

"It was interesting for you to watch an incipient attack in your patient and to abort it. Your relation of this occurrence makes me think that there is a large hysterical element in this case; which would be very natural, in view of the things that had been done to her genital organs and also because of the history of toxic goiter.

"The description that you give of your findings on abdominal palpation during that attack make me incline to the opinion that the murmur found over the descending aorta was functional and temporary. I have never known a functional or organic murmur (bruit) of any of the valves in the heart transmitted to the abdominal aorta. Of course, it might be thinkable that such transmission may occur. Still, you tell me that you had not heard it on previous examinations. The inference is very natural that the murmur was accidental or, perhaps, better, incidental and that it was due to a tumultuous heart action caused by the epileptic excitement.

"It could hardly have been a hemic murmur, for it does not appear from your description that this patient is markedly anemic.

"I agree with you that extraction of that bad tooth will go far in approaching your patient still further to recovery. However, do not indulge in overdrawn hopes, nor permit your patient's husband to expect definite results in less than two or three years. These attacks have a little way of returning, even after several months of absence, and usually they are then brought about by dietary indiscretions, by constipation, by excitement, fright,

or some such unusual (and, yet, commonplace) occurrence.

"To come back to that murmur. If you had had an aneurysm, you would have more definite symptoms. Savill describes the symptoms as follows:

"Aneurysm of the abdominal aorta is a pulsatile and expansile swelling also immobile during respiration. In thin subjects, a thrill may be felt, and a murmur heard. In auscultating the abdominal aorta, we must be careful not to produce a murmur by pressure of the stethoscope. It is attended always by a severe fixed neuralgic pain in the spine, and sooner or later breathlessness and cardiac signs. It is these latter symptoms which distinguish true aneurysm fro 'pulsatile aorta' and from a swelling in front of the vessel to which the pulsation has been communicated. An endeavor should be made to grasp the swelling on each side, so as to observe the expansile nature of the tumor."

[Let everybody, who has studied his epileptics closely, take part in this discussion. Much more light is needed on this difficult subject. It is the medical practitioner, not the laboratory man, who must supply it.—Ed.]

MATERNAL IMPRESSIONS

Following publication in Clinical Medicine (Dec. 1919, and Jan. 1921,) of my reports on maternal impressions and other observations of the canary family, numerous physicians and other readers of Clinical Medicine from five widely separated states of the United States have written me requesting information concerning the care and breeding of canaries, and many of them expressed a desire to read another report on later observations.

The old controversy seems yet very much alive and, whether the question of maternal impressions or interest in the people's universal pet prompted these letters, it mattered not. I gladly answered all of them (31); for, (wonders do not cease!) each writer enclosed postage for reply.

My birds went into this last breeding season in fine condition. No changes were made in the matings of the parent birds of the monstrosities or others included in my past reports, and they occupied the same cages, in the same locations, for the third time under observation.

When the itinerant aviators could no longer profiteer in this section, they cranked their engines and noisily flew to other promising fields. During this season, we witnessed very few commercial or exhibition flights, but many army planes flew over or near the city. In several instances, they would have passed unnoticed by me, had not the warning note by some one of the male birds and the instantaneous heed given it by every bird in the rooms, called my attention. Often I had difficulty in locating the plane, but I always found it. Sometimes, fully two miles off, on the very rim of the horizon, or up among the clouds. Yet, it had been sighted. Their call telling the presence of an airplane (perhaps, to them, a great hawk) in tones and delivery, differs from their other warning signals as much as the enunciation of our words "trolley" and "automobile" differs.

I do not know that the birds suffered severe fright from any cause during the entire season. They built fine nests, laid 127 eggs and hatched 87 chicks, not one of them deformed or defective.

No intentional effort to frighten them was made and I know of no disturbance during the times their different clutches of eggs were being laid, as was the case in the instances already reported. As this period would correspond to the enceinte stage of mammals, it, no doubt, would be an influencing factor and should be taken into consideration in summing up the data on the question.

Now, I wish to relate an experience which, I hope, will interest some of the chemist-, dietitian- and food-expert readers. I trust, too, that we may soon have the pleasure of reading their conclusions as to the whys and wherefores of what took place, with comments.

The percentage of eggs hatched was higher than the average and the chicks suffered no lack of parental care. Yet, my loss was considerable. The first hatchings resulted in 28 strong chicks. The old birds were very attentive in hovering and feeding them. All went well until the chicks were about half-grown, or until they were old enough that the parents fed them without first mixing the food. When this stage was reached, the little ones began to sicken and die; whole nests of them within 36 hours.

The feed universally used for young canaries consists of hard-boiled eggs and crushed crackers thoroughly mixed. A sprig of tender lettuce is provided every second or third day.

I was feeding as I had in past years, but something was wrong. Whether the eggs used had been in storage or not, was not known. Eggs taken out of water-glass solution and fed to birds were blamed for several deaths in a past season. Eggs warm from the nest were fed and still deaths continued. The green stuffs fed were from my own hot-bed and no insecticides had been used. No mites could be found on the birds or about the cages which were

kept carefully cleaned. Examinations of a few digestive tracts were made without determining anything.

While speaking in my home of the losses, my wife suggested that the table crackers didn't have the same taste and flavor of those used some months before. I then made a chemical test of the crackers and found vegetable fats with little of animal fat. We knew that cracker factories had heretofore consumed great quantities of butter. I was feeding the same brand as in past seasons; however, we then baked crackers at home, using butter fat only in the mixing.

Only six of the 28 chicks were alive when this change was made, and they survived. The second hatch of 33 chicks followed soon after and was fed with the change of crackers. Not one was lost, nor did any similar death occur thereafter.

I am personally acquainted with the manager of the factory in which the commercial crackers were baked and went to him and told my story. He readily informed me that a first-rank chemist had been in their service the preceding eight months, experimenting in substitution of vegetable for animal fats and that all crackers put out by them in recent months contained some percentage of either soy-bean, peanut, cotton-seed or cocoa oils, or combinations of these with butter. Shortly after gaining this information, I was called upon by an acquaintance who had successfully raised canaries and at times bought breeding stock from me. She told that she had but one bird living out of seventeen in the first hatchings. The others died after thriving for a week or longer. I related my experience and then learned that she had fed the same make of crackers as I. She baked butter crackers that day; fed them and saved the one remaining chick. She had no similar losses in the hatchings that followed. Three amateur breeders came to me for help. Each related an experience that differed from that of my customer only in numbers of chicks and losses. The results following advised change in feed, reported later, were equally alike.

Two of my mother birds died; but, from their actions, I could only conclude they had died of grief.

Why this feed did not kill the old birds, may be accounted for by their process of feeding the young which is very much the same as that of the common pigeon. The food is swallowed and mixed with the stomach juices to a fluid condition for the early feedings. This dilution is lessened from day to day and, by the time the squab stage is attained, is fed in the form of pellets so slightly moist as to require an effort in bolting them.

Whether or not any of the food taken up for the young is assimilated by the parents, is hard to determine. My observations lead me to believe that it is not. Certainly not if adult feed is within their reach. I have yet to see one of them take up food and not fly to the young within a few minutes after and distribute it. Either parent alone can, and often does, feed a nest of young to maturity without permitting them to hunger at any time. However, I had suspicion in several instances of there being an element in the feeding by the male which exerts a favoring influence upon the development of the chicks, and I have proven this by experiment to be so. That is another story. I am certain of having found the cause of the deaths herein mentioned; but, as to its being one particular oil or a combination of oils, I haven't had the heart to use my flock for subjects in making tests. From evidence at hand, it would appear that the addition of the stomach juices acted as an antidote to the poisonous element and the young thrived until these were eliminated. If the parents did consume any of the feed without harmful effects to them, the toxicity to the young might be accounted for by the undeveloped state of their digestive organs.

I am informed that the use of the vegetable oils I have mentioned is almost universal in the large cracker factories throughout the country. Crackers are fed in large quantities to babies and it seems not unreasonable to believe they would suffer therefrom if the tiny portion consumed by a canary chick causes its death. I want to know. I have arranged to be called and given opportunity to observe any cases wherein the history and conditions give promise of developing definite information on this line, that comes to the notice of the nurse who directs the work of the Visiting Nurse League in this city.

I might relate many peculiar and instinctive actions of these birds, some of them really astonishing and never noticed in detail before I began, three years ago, to keep written memoranda of my observations. But, the good editor would likely remark that the columns of his journal are for the publishing of more serious matter than "Little Nature Studies" of the Canary Bird.

W. F. Schrader.

Fort Wayne, Ind.

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[While the most immediate interest attach-

ing to Doctor Schrader's report relates to dietetics and may possibly afford an explanation of some obscure digestive disorders in the case of small babies who have been fed on crackers—the primary point of this report refers, of course, to the question whether there is such a thing as "maternal impressions".

Doctor Schrader's first two reports (CLIN. MED., 1919, Dec., and 1921, Jan.) were to the effect that the brutal fright to which his canary birds had been exposed, while nesting and hatching, resulted in characteristic deformities in the chicks.

During this last breeding season, the susceptibilities of the canaries (some still of the original lots) were not exposed to such savage onslaughts. True, occasionally the male birds spied aeroplanes far away and promptly gave their characteristic warning signal. However, as far as Doctor Schrader knows, the birds did not suffer any severe fright from any cause during the entire season. Of eighty-seven chicks hatched, not one was deformed or defective.

It is pointed out by DeLee that deformed offspring, after severe fright, are observed especially in animals. In humans, circumstances seem to be rather different; and, yet, the popular opinion is, that there is at least a possibility of injury suffered by the fetus due to maternal impressions. There is not a single mother confined who does not ask, as soon as possible, "Doctor, is the baby marked?"

While the problem is by no means settled, most obstetricians are doubtful as to the actual importance of the role played by maternal impressions. They believe that most deformities observed in newborn infants are due to coincidence brought about by disturbances of development long before the occasions arose for so-called maternal impressions. Some obstetricians do not mention the subject at all in their textbooks. However, E. P. Davis, for one, relates that he was presented with the head of a fetal pig. In contour this resembles plainly the head of an elephant, while from the forehead projects an appendage closely resembling an elephant's trunk. This specimen was obtained by a physician, under the following circumstances:

A gravid sow was greatly frightened by a circus parade in which several elephants were a principal feature. The sow rushed in great alarm into a stable and hid persistently from the sight of the procession. When the litter of pigs was born, one showed the curious malformation described, and was obtained as a specimen.

We believe that this quotation is relevant. Indeed, basing our conclusion upon this observation of Davis' and upon Doctor Schrader's experiences, as well as on one personal observation which we recorded some years ago, we are by no means willing to pass off the subject of maternal impressions with an airy declaration that it is a matter of coincidence only.—ED.]

Dr. Frank Lenart, Chicago, formerly Captain, Polish Army

A NEW THEORY OF CANCER TREATMENT

Certain scientific facts have been given to the study of causes for cancer growth, within the past two years, that, to some extent, point us toward a remedy.

The lessened alkalinity of the blood; the craving for common salt; the increased reaction to local stimuli of tissue cells, all have a meaning that prompts thought.

I have been trying to devise a method of

accurately determining the relative alkalinity of the blood, so that I may use it clinically, but have not succeeded to a satisfactory point. If this test could be made practical, it would no doubt be valuable where acidosis is suspected.

The study of acidosis, its causes and its effects, is well worth our careful investigation.

The presence of sodium chloride in the blood indicates that it passes directly as ingested into the body without chemical change. There is no chemical reaction that we know of in the process of primary or interstitial digestion that produces sodium chloride.

But, we know that hydrochloric acid is a natural part of gastric equipment, and but little material can be found in ordinary food as its source outside of sodium chloride.

Therefore, we must conclude that at least a part of the salt is broken up in the stomach, part of it liberating the chlorine to combine with hydrogen to form HCL, and the rest going to the glycogens of the liver, which contain sodium.

Alcohol may be placed in the same class as sodium chloride, in its method of passing into the blood. It passes unchanged into the blood to some extent, and a portion undergoes chemical change, giving up chlorine; but, while sodium chloride is a universal article of consumption, alcohol drinking is but occasionally a habit.

It can not be said that alcoholics are more frequently afflicted with cancer than those who abstain completely from its use.

The chlorides are usually easily soluble in ordinary liquids. Therefore, a solution of common salt in the stomach is in a condition for immediate osmosis, and the excess of chlorine, if such there be, must look for another base.

If hydrogen can be found at hand, hydrochloric acid is first choice, and an excess is a disturbing element in natural metabolism.

We know that acids and irritating salts stimulate tissue cells, both as to physical activity and cell proliferation. We have also been told by many authorities that cancer cells are but exaggerated normal tissue cells, more rapid in growth and proliferation, crowding normal cells into decay, with consequent toxic results.

If these assumptions are correct, we should expect that, if the blood becomes less alkaline than it should be, the effect on tissue cells would be irritation, excessive growth and action. And if the blood, in its tendency to return to normal alkalinity, should take in an excess of sodium chloride, it would favor the same results.

This situation should logically lead us to search for some means of reducing the amount of substances that enter the circulation and overirritate tissue cells; such as acids and salt.

The liver stands between excessive acid content and normal amount. The kidneys excrete acid salts from the blood, in order to maintain normal alkalinity as near as possible.

But, if both of these organs, working in unison, can not bring the blood back to its normal reaction, we might truly expect just such a result as cancer.

Among the chlorides that are mostly very soluble, there is one that forms a complete resistance to any solution by fluids in the digestive canal.

Chloride of silver solution passes entirely through the stomach and intestines without chemical change or physical solution.

If we could use the stomach as a test tube, mixing the sodium chloride solution with a solution of silver that would easily give up its base, we would have insoluble chloride of silver and an alkaline or at least neutral sodium salt.

The chloride of silver would then pass down unchanged and be excreted, carrying the chlorine off, while the sodium might be used by the liver in normal products.

The theoretical result would be, lessened acidity of stomach contents, greater alkalinity of the blood, and less irritation of tissue cells, of an abnormal nature.

The sulphide of silver forms the solution of this problem.

It is a salt that is easily broken up chemically, the sulphur radicle combines with sodium to form sulphites that are normal products of the liver, and a solution of sulphide of silver may be made into a pleasant beverage that, taken into the stomach with the food containing chloride of sodium, would instantly get busy, doing good work.

A. D. Hard.

Long Beach, Calif.

[We are intrigued by Doctor Hard's suggestion, and should like to know how it impresses those of our readers who are familiar with physiological chemistry. Let us have a good discussion on this problem. It is one of the most important ones confronting the medical profession today.—Ed.]

HOUSEHOLD DRUGS—OTHER USES

Ammonium Chloride

1.—Its solution is a very good substitute for ice, and is applied over the head in cases of

high fever, paralysis and such other inflammatory troubles where ice is indicated.

2.—It is used in 20 to 30-grs. doses with pepper to check the onset of fever.

3.—It increases the flow of bile and, in cases of fever where there is burning sensation in the stomach, associated with tympanites, it is mixed with other drugs to relieve these symptoms.

4.—It is very useful in hepatic congestions and in enlarged livers, when used as a local application by making it into a thick paste with water. It can be given internally also in 20 to 30-grs. doses.

5.—It is a very good diuretic.

6.—In inflammation of the breasts at the time of lactation, its local application relieves the pain.

7.—It is applied locally in cases of hydrocele where there is a tendency to inflammation.

8.—In menstrual disorders, such as irregular menstruation and scanty menstruation, it is used internally in 20-grs. doses with success.

9.—In chronic bronchitis or in phthisis, where there is great difficulty in removing the phlegm, it loosens it and acts as a very good expectorant.

10.—It is also used as a very good blood purifier.

11.—When mixed with calcium carbonate, it is used as smelling salt in fainting, delirium, hysteria, etc.

12.—In hepatic colics, it is given mixed with treacle in pill form.

13.—In "guinea worm," it is applied externally over the swollen part and is given internally with butter.

14.—Its inhalations are very useful in relieving the asthmatic attacks.

15.—It reduces the inflammation of bronchial tubes when taken with betel leaves.

16.—It reduces the inflammation of renal tubules when taken as an infusion with tribulus terrestris (caltrop).

17.—In neuralgia of the gums, it can be used as a gargle in the proportion of 40 grs. to an ounce of water.

18.—In ordinary conjunctivitis, it is mixed with alum and applied locally.

19.—In leucoderma, it is applied locally mixed with honey.

20.—In toothache, 1 gr. engulfed in cotton, should be put by the side of the aching tooth.

21.—In neuralgia of the head, it can be used as a smelling salt, mixed with turmeric, and it can be taken internally also in 5 to 10-grs. doses every 3 hours.

22.—In whooping cough, it can be given in an infusion of ashatoda vasica. [?—Ed.]

23.—In scorpion bite, it can be used as a smelling salt, mixed with calcium carbonate.

24.—It acts as an antidote in cases of poisoning by ferri sulphas.

25.—In cases of poisoning by gass, ammonium chloride paste should be given internally.

26.—Lozenges of ammonium chloride are very useful in congestion of the pharynx and larynx and in loss of voice resulting from cold and bronchial cough.

27.—Vapor ammonii chloridi is used in affections of the throat and eustachian tube, and in relieving the spasmodic attacks of asthma.

Vallablidas N. Mehta.
Viramgam
Bombay Presidency.

—

[Some of the uses of ammonium chloride described by Doctor Mehta are—let us say—unexpected. Moreover, some of the drugs with which he mixes the remedy under certain conditions are not known in this country. Still, we have been interested in what our colleague in India has to say and impressed with the numerous uses to which he can put such simple remedies as sodium chloride (this Journal, August, p. 622) and ammonium chloride.—Ed.]

Medical Officers, all Americans, in Captain Lenart's Polish Base Hospital

THE AMERICAN SANATORIUM, SALTILLO, MEXICO

Dr. T. H. Standlee, of Saltillo, Mexico, recently sent us an attractive picture of a portion of the sanatorium which he is conducting in Saltillo, Coahuila, Mexico, with the following interesting information. He says:

This building covers about two acres of land, including patios and gardens, with stables, etc.

First Patio of the American Sanatorium

The building is situated in the heart of the city and is very ancient. The parlor is 26 by 60 feet. The patio part of which is shown here is 80 feet square. The columns as here seen and of which there are in all 28, are about 300 years old. Saltillo was once the capital of Texas. In 1847-8, this city was the headquarters of General Taylor, and the building he occupied is still intact, just like he left it.

The Work Room

Saltillo has a population now of 63,000. At an altitude of 5200 feet, it is situated in a valley surrounded by mountains that rise from 1000 to 2000 feet higher. The water supply is obtained from springs from these mountains and is delivered to the city by gravity. It is not abundant but plentiful, pure and nearly as clear as air. The rainfall is scarce, and agriculture depends upon irrigation mostly.

The climate here is probably one of the best all-the-year climates in the world. March and April being the most disagreeable months because they have more wind. In winter, it rarely ever frosts, and summer is always cool. (In the shade, you will never perspire.) For tuberculosis, the climatic conditions are unexcelled.

Saltillo is surrounded by several cotton mills, smelters, and small wood-working machinery. But money is scarce, due to the world's financial affairs more than to internal conditions. The United States has a large trade here owing to its proximity and not the results of commercial push on the part of American merchants and manufacturers.

The people as a whole look upon their own government with the attitude of a waiting, watchful doubt; but they seem to be gaining more confidence as the Obregon regime proves itself master of the situation. One thing upon which they all agree is that they are tired of revolutions and want peace.

T. H. Standlee.

Calle Morelos No. 15.
Saltillo, Mex.

NATIONAL BOARD OF MEDICAL EXAMINERS

The National Board of Medical Examiners announces the following dates for its next examinations:

Part I: February 12, 13 and 14, 1923.
Part II: February 15 and 16, 1923.

The fees for these examinations have been continued at the reduced rate for another year. Applications for these examinations must be forwarded not later than January 1, 1923. Application blanks and information may be obtained from the Secretary, Dr. J. S. Rodman, Medical Arts Building, Philadelphia, Pa.

What Others are Doing

THE WASSERMANN REACTION FROM THE CLINICIAN'S VIEWPOINT

Based on the comparison of more than 1700 serologic examinations, Dr. C. J. Broeman, Cincinnati, Ohio, presented a paper to the *American Journal of Syphilis* (6: 499, July, 1922) of which the following is an author's abstract.

The clinical experience with the Wassermann test, in a series of 366 private patients, upon whom 1742 tests have been made, is recorded. A discrepancy of some degree in 36 percent of the cases and variations of three-plus or more in 25 percent emphasizes the importance of careful clinical examination, including history of syphilitics. Every fourth laboratory test may bring doubt and confusion. In his series, 14 percent of the cases were reported negative from one laboratory and two or more-plus in both tests from another laboratory. Sixteen percent were reported as not more than one-plus positive from one laboratory and four-plus from a second laboratory. Out of 276 cases, 75 percent were reported identically on all tests of which 233 were negative. One-fifth of the negatives should have been positive according to their history and therapeutic tests. Fourteen percent of his cases show definite infection, with negative Wassermann.

The serologist has been given the balance of the power by some writers on the subject. The Wassermann test must not be too strongly relied upon, as is shown in a series at one laboratory, where 52 negative reports were returned, upon 52 patients with positive history and positive therapeutic tests for syphilis. Undoubtedly, a routine Wassermann on all patients would be of benefit if the laboratory were strictly reliable.

The author has the test performed only on suspicions and positive luetic cases; although a clean-cut syphilitic case requires no Wassermann, it is better to have one. A negative Wassermann in the presence of a suspicious sore of the penis does not exclude syphilis, nor does a positive Wassermann necessarily mean that the patient has syphilis.

It is absolutely wrong to make the diagnosis of syphilis, or begin treatment, on the laboratory findings, and in the absence of clinical or historical evidence. If the diagnosis of syphilis is accepted, the patient should be treated for two or three years even if the blood is negative. The laboratory report is not and should not be the final word; the clinician's is, and ever must be, the final one, when dealing with human ills.

Kilduffe claims that a positive reaction, with a cholesterinized antigen, of four-plus is an indication of syphilis in the blood. The author does not agree with this statement. Eight cases in his series show that it is incorrect. A positive cholesterinized antigen alone, with no history or clinical signs of the disease, does not mean syphilis. Stokes recently commented upon the too delicate reaction of this antigen. He says, "there is little doubt in my mind that a single antigen test with a highly cholesterinized preparation, while it identifies many concealed infections, will yield a surprising percentage of false positives."

The author's guide to the interpretation of the Wassermann reaction as a general working basis is as follows:

1.—A four-plus reaction means syphilis; not, however, if the cholesterinized antigen alone is four-plus.

2.—A three-plus means syphilis.

3.—A persistent two-plus means syphilis.

4.—Anything below a two-plus, without any clinical symptoms or history of infection, does not mean syphilis.

5.—A negative reaction, without any clinical symptoms or history of infection means that the patient has not syphilis.

ACUTE INFECTION OF THE BILIARY TRACT

The British Medical Journal for June 10 (p. 908) contains a study, contributed by D. P. D. Wilkie, of several cases of acute infection of the gall bladder and bile duct which, in the author's experience are frequently associated with definite physical signs at the base of the right lung. In a number of cases, these signs have led to an incorrect diagnosis, a primary lung lesion being suspected and the pain in the right hypochondrium (which was also noted) being regarded as referring from the pleura. A careful study of his cases has led the author to draw the following conclusions:

1.—That, in a patient complaining of pain at the right costal margin and round the right side of the chest, the discovery of crepitations or even of pleural friction at the right base does not preclude, but may support, the diagnosis of an acute biliary infection.

2.—That such pulmonary signs are secondary to the biliary infection, and, far from contraindicating operation, will be effectively treated by dealing surgically with the primary focus of disease.

TWO UNUSUAL CASES OF ABDOMINAL TUBERCULOSIS

In the *British Medical Journal* (May 14, 1912, page 703), E. G. Slesinger, Assistant Surgeon, Guy's Hospital, reports two cases which appear to be sufficiently unusual to be worth recording, partly on account of the difficulties in diagnosis and partly on account of the apparent rarity of mesenteric abscess at the ages at which it occurred in these two patients.

Case 1.—H. P., a male infant aged 5 months, had been noticed to appear ill for ten days. Diarrhea was present during the whole of this period, the stools being greenish and offensive, but not containing any blood. The child had been taking its food badly and had vomited four times before it was brought to the hospital, when it was at once admitted.

On admission he looked extremely ill. He was pale, with sunken face and restless. The abdomen was very greatly distended, appeared to be tender, was resonant in the middle and dull in the flanks. The child vomited once in the ward, but the vomit was in no way characteristic. Pulse very feeble, 150 to 160, temperature 102°. The abdomen was too tensely distended for anything to be palpated, and the most probable diagnosis seemed to be a pneumoccal peritonitis.

Laparotomy was performed under a spinal anesthetic. On opening the abdomen a large quantity of purulent fluid and intestinal contents escaped, and a loop of intestine, showing a perforation, presented. The bowel wall in the neighborhood and over most of the coil was edematous and obviously ulcerated. The perforation was closed and was reinforced with an omental graft owing to the difficulty of making the sutures hold satisfactorily. It was noticed that the greater part of the pus came from a mass which could be felt in the abdomen, and this on further exploration proved to be a mesenteric abscess, from which several ounces of pus were evacuated. A tube was left draining the abscess cavity and Carrell instillation of the peritoneal cavity with saline was instituted. The child appeared to rally at first, but died the following morning.

Post-mortem examination showed extensive tuberculous ulceration of the small intestine; one of the ulcers had perforated, and the cavity of the mesenteric abscess was in relation to a ruptured tuberculous caseating gland.

Case 2.—F. J., a male aged 34, gave a history of pain in the left iliac fossa for three weeks, the pain being also referred to both lumbar regions. It was not influenced by food or exercise, but was a good deal worse at night. The patient had been extremely constipated, but had never vomited. He was admitted to hospital as a case of subacute intestinal obstruction. There was some abdominal distention, with tenderness over the left iliac fossa; a tumor of somewhat vague contour, but of firm consistence, could be palpated in this region; manipulation was painful. The tongue was furred and dry, and an enema failed to act. Temperature 99.4°, pulse 100. The tumor felt like an abscess walled in by bowel, but as auscultation and palpation revealed the cecum in the normal position and apparently not connected with the tumor, a tentative diagnosis of an abscess in connexion with a Meckel's diverticulum was made. Diverticulitis was considered, but seemed unlikely on account of the mobility of the tumor.

Laparotomy was performed, and the tumor explored. The appendix was attached by its tip to the tumor, and was secondarily somewhat inflamed and consequently removed. A well formed Meckel's diverticulum was separated from the loops of bowel bounding the mass, but was seen to be normal apart from some injection. The mesentery of the small intestine was noted to be very thick and short, the bowel being bound down almost to the posterior abdominal wall; on separating the loops, about a pint of fecal-smelling pus was evacuated. On exploring the cavity, it was found to be bounded by mesentery and bowel, and from one wall half of a semi-calcareous gland was removed. In spite of the feculent odour of the pus, cultures remained sterile on incubation. The abscess cavity was drained, and the patient made an uninterrupted recovery, the track of the drain healing quickly.

Among the Books

LUYS: "GONORRHEA"

A Textbook on Gonorrhea and its Complications. By Dr. Georges Luys. Translated and Edited by Arthur Foerster. Third Revised Edition. New York. William Wood and Company. 1922. Price $6.50.

The subject of gonorrhea has been so thoroughly covered by a number of American and foreign authorities, that the Reviewer finds his task of discussing the present volume a difficult one, and this, in spite of the fact that the author is acknowledged as one of the leading French urologists.

Inasmuch as a reviewer always considers two things, namely, scientific merit and usefulness to the practitioner, the former cannot be made a subject of discussion, since the volume represents the very best that has been achieved on modern urology. Nevertheless, one notes here and there that the author has not taken into account every advance, and we Americans are very prone to take notice when any addition to medical science, of an American source, is overlooked by a foreign writer, especially of an encyclopedic book; for, that is what Luys' volume actually is.

To illustrate our point, the author advises in suppuration of the inguinal gland wide incision and curettage. This is an extensive operation which can be supplanted by an ingenious little operation devised by Colonel Keller, of the United States Army, one of the best known surgeons of that service, who recommends a Hale-puncture from above downward followed by injection of an antiseptic emulsion.

The subject of complement fixation is given about three lines. On the other hand, the Reviewer is in accord with the author if he refuses to become overenthusiastic with reference to the vaccine and serum therapy of gonorrhea.

Outside of the criticism recorded, the book covers every angle of gonorrhea.

It is divided in twelve chapters in which the history, etiology, pathology, clinical diagnosis including urethroscopy, the treatment of the acute and chronic inflammations in men, women and children, as well as the recognition and care of complications are discussed in a highly systematized manner.

One great feature of the book, which merits unstinted praise, is the fact that the author seems to imbue the reader with a spirit for clinical work devoid of routinism.

The specialists, who have the training and equipment, secure a vast share of patients that have gone the rounds in the offices of general practitioners whose sole stock in trade are irrigations and dilatations. The genitourinary specialists are right when they claim that no practitioner has a right to treat gonorrhea, especially the chronic form, who does not know how to use the urethroscope. This procedure is so much more simple than cystoscopy that any one possessing a simple outfit, studying this volume and applying himself with the desire to learn, can look forward to a time in the not-too-distant future, when he can give expert care. "Clap" has ceased to be a disease of so little importance that medical students and druggists and laymen are considered qualified to render aid. It is a very serious affection meriting our utmost attention. To the really serious minded men, Luys' work is recommended as one of the very best textbooks on this subject.

DICK: "RICKETS"

Rickets, A Study of Economic Conditions and their Effects on the Health of the Nation, in two parts combined in one volume, freely illustrated. By J. Lawson Dick, M.D. New York: E. B. Treat & Co., 1922. Price $5.50.

Here is a monographic treatise on rickets which ought to prove of great interest to all those living in regions where this disease is frequent. The author has collected and utilized all valuable information concerning the disease and presents it, together with his conclusions. We learn that, while rickets is essentially a disease of the first two years of life, no greater mistake could be made than to consider it only as a disease of infancy. Rickets is closely influenced by the standard of national health. It attacks the new-born infant at a time when it is released from a vegetative existence in which its nutriment is elaborated and supplied through the maternal circulation and its environment is the sheltered seclusion of the womb. At birth, the child must rapidly adapt itself to an enormously extended environment and has to carve out for itself, as it were, the course and line of growth which it will take.

As to the etiology of rickets, it is now well established that, contrary to opinions held but a few years ago, the food factor plays no part in the origin of the disease. No deficiency or defect of feeding will produce rickets when (better, IF) the child is exposed to bright sunshine and lives much in the open. That accounts for the fact that rickets is practically unknown over a large area of the globe's surface where conditions of sunshine and open-air life prevail.

The first part of the book deals with the geographic distributions, the signs and symptoms of rickets. The second part presents the natural history of rickets, the etiology of the disease and its treatment. The book is interestingly written and is a valuable acquisition to the physician's library.

HIRSCH: "GONORRHEA AND IMPOTENCY"

Gonorrhea and Impotency. Modern Treatment. By Edwin W. Hirsch, S.B., M.D. With an additional lecture on Ultra-Violet Radiation, by A. J. Pacini, M.D. Colored illustrations from life. Schemio-diagrammatic drawings originated by Eugene F. Carey, M.D. Chicago: 1922. The Solar Press.

Here is a little book that strikes us as being distinctly worth while. The author is filled with enthusiasm; that is clearly discovered in the manner in which he treats his difficult subject. All through the book, whether he speaks of gonorrhea and its treatment, or whether he deals with impotency and allied topics, he goes straight at the point. Moreover, it is manifest that he speaks from wide experience and that success has been given to his efforts in large measure. The conviction underlying his words attracts. One wants to go and do likewise. That is the secret of good writing.

The author maintains that it is necessary to tell the story of how to cure a case of gonorrhea in such a manner that it will be readily understood by the general practitioner. That, he claims, is not done by the textbooks, hence his little treatise. He offers no short-cut to the successful treatment of gonorrhea. He employs the means that are available and he justly asserts that we need not look for a new cure, because effective means are at our doorsteps—only, we must know how to use them.

Life being a physical as well as a chemical process, or series of processes, it is well to keep in mind the physical factor. For that reason, the author stresses the importance and value of physical remedial agents, more especially diathermy. With this, he has succeeded many times when chemical means failed.

The author's discussions are interesting; especially what he has to say about impotence, its causes; also about the ever-present sex-problem. However, better get the book and read it for yourself.

DE KRUIF: "OUR MEDICINE MEN"

Our Medicine Men. By Paul H. DeKruif. New York: The Century Co. 1922. Price $1.75.

This is the sort of book that, at first sight, may be listed either with those designated as muck-raking or as a jeremiade or as a companion volume to John Hopkins Adams' "The Great American Fraud." The first pages give one the impression that the author has it in for physicians, and that he wants to vent his spleen on them. However, a careful reading shows such a preconceived conception to be wrong.

It is unfortunate that so much of what De Kruif charges the medical profession with is true. It is humiliating to have to admit that everything is not as it should be. Since it is always a good thing if we can "see ourselves as others see us," we recommend the careful study of Doctor De Kruif's book to all physicians. We have entered in greater detail into his various arguments in an editorial article appearing on page 870 of this issue of CLINICAL MEDICINE.

MUKHERJI: "INFANTILE CIRRHOSIS OF LIVER"

Infantile Cirrhosis of Liver. By Santosh Kumar Mukherji, M. B., M. A. R. S. With a foreword by Kamor General B. H. Deare. Printed at The Windsor Press. Calcutta. 1922.

Here is an interesting little book dealing with a disease peculiar to India that does not seem to be recognized as an independent malady by authorities on tropical diseases. However, the author's argument is convincing and we believe that he has made good his claim concerning infantile cirrhosis of the liver.

"BREAD FACTS"

Bread Facts. Third Edition. Published in the Interest of Better Bread Making by the Research Products Department, Ward Baking Company, New York. 1920.

This book is published in the interest of better bread making and advances the plea that bread is baked better and more economically in a well-appointed bakery than in the kitchen of the private home. The book contains a complete discussion of bread, showing that this is

actually the staff of life. It also shows that the sciences, especially chemistry, have been resorted to for the improvement of bread. We have to insist only that a properly made flour should be employed in the baking. In general, it must be agreed that, in a large bakery, where the various steps in the making of bread are regulated by machinery, better results can be secured than in the more or less haphazard baking that is done at home.

ROBEY: "HEART FAILURE"

The Causes of Heart Failure. By William Henry Robey. Cambidge: Harvard University Press. 1922.

Here is a useful little book in which the expression "heart failure" is employed in its proper meaning. It does not signify death but, rather, the failure of the heart to function properly; in other words, functional disability of the heart. This, of course, may be due to organic disease or to functional derangements. Nerve strain, emotional strain, excessive responsibility and other factors have contributed in causing failure of the heart to function properly.

The author makes it clear that prophylaxis and the recognition of potential heart disease are extremely important. He reasons that, as we have our watches and automobiles regularly overhauled, we should not allow our bodies to go on until they break. Periodical examinations will tend to preserve health and to forestall disease. This is a very excellent little book for the intelligent layman and may be read to advantage by the physician himself.

THOM: "SYPHILIS"

Syphilis. By Burton Peter Thom, M. D. Philadelphia: Lea and Febiger. 1922. Price $5.50.

The author has set himself the task to discuss syphilis as it confronts the physician in his every-day work. He points out correctly that syphilis is a frequent underlying cause of many obscure disease-conditions. It is, more than any other disease, the simulator if not the originator of many degenerative syndromes which are not apparently related to it. Indeed, syphilis is so independently connected with most problems of the internist that an exact knowledge of syphilis lore is urgently required.

The Reviewer was somewhat astonished to find the statement (p. 188), in the discussion of arsphenamine, that the elimination of arsenic through the kidneys is practically accomplished within twelve hours, the amount remaining in the tissues thereafter being so slight as to be negligible. We were under the impression that the injection of arsphenamine produces "depots" of arsenic in the body—at least if done into the muscle—and that these are absorbed only very slowly. In *The American Journal of Syphilis*, for July last, there is an article dealing with the problem of arsenic excretion which is entirely at variance with this assertion of Thom's.

Doctor Thom's book is of handy format and so little bulky that one notes with surprise the figure of the last page is 510. The thin, opaque paper on which the clear, beautiful text is printed has made this possible. Doctor Thom's book on syphilis can be recommended, especially to general practitioners to whom it will be of great assistance.

CROSSEN: "DISEASES OF WOMEN"

Diseases of Women By Harry Sturgeon Crossen, M. D., F. A. C. S. Fifth Edition, Revised and Enlarged. Illustrated. St. Louis: C. V. Mosby Co. 1922. Price $10.00.

We note with interest the printing of a new edition of Crossen's "Diseases of Women." This is one of the newer textbooks on this subject and has rapidly made a place for itself among the best. It is a remarkably well gotten up book and is fully and beautifully illustrated. We imagine that few physicians who are doing much gynecological work will care to forego the advantages of possessing a copy of Crossen's book.

MacKEE: "X-RAYS AND RADIUM"

X-Rays and Radium in the Treatment of Diseases of the Skin. By George Miller MacKee, M. D. Illustrated. Philadelphia: Lea & Febiger. 1921. Price $9.00.

It is in diseases of the skin that X-ray and radium treatment has been of particular advantage, and it is here that the results often are tangible, not to say spectacular. Physiotherapists will be keenly interested in this volume.

FISHBERG: "PULMONARY TUBERCULOSIS"

Pulmonary Tuberculosis. By Maurice Fishberg, M. D. Third Edition, Revised and Enlarged. Illustrated. Philadelphia: Lea & Febiger. 1922. Price $8.50.

Fishberg's "Tuberculosis" is one of the standard guides for the general practitioner and also for the tuberculosis physician. It deals with the practical aspects of the tuberculosis problem principally, and for that reason will prove acceptable to practitioners who do not

care to enter much into theoretical dissertions.

Fishberg's book really does not need introduction. It has made a place for itself that is fully recognized and unassailable.

The Reviewer is interested in finding, on glancing through the volume, that Doctor Fishberg lays great stress on the great susceptibility of consumptives to psychic influences and, for that reason, to deliberate psychotherapy. The *spes phthisica* is proverbial; its reverse, which might be designated as the gloom of consumptives, is just as much of a reality. Tell a consumptive that he is doomed, that nothing can be done for him, that he can not be cured, and he will become very much worse until some physician, more kindly intentioned, more optimistic and (shall we say it?) with more common sense will pronounce a more cheering message, will explain to the patient why a "cure," that is, a restitution to normal, can not be expected, but that marked improvement and very often a very comfortable mode of living can be attained. If it is necessary in almost all methods of treatment for almost all varieties of internal diseases to mix drugs with brains, it is highly essential in treating consumptives, to influence their mode of thinking, their attitude toward their various problems, to boost their confidence, their fighting spirit, and to encourage them, as much as can be done, with a reasonable regard for truth. Not that it is always well to stick too closely to the truth. The Reviewer confesses to being quite willing to lie like a gentleman if, in his opinion, it will make his patient feel better; for, that means that he will improve at least temporarily.

All this hasn't much to do, except indirectly, with Fishberg's "Tuberculosis." The book is well written. It is freely illustrated, the author is conservative in his judgment and in his views.

"DYKE'S AUTOMOBILE ENCYCLOPEDIA"

Dyke's Automobile and Gasoline Engine Encyclopedia. The Elementary Principles, Construction, Operation and Repair of Automobiles, Gasoline Engines and Automobile Electric Systems; including Trucks, Tractors, and Motorcycles. Simple, Thorough and Practical. By A. L. Dyke. Thirteenth Edition, Enlarged and Entirely Rewritten, Rearranged and brought down to date. Chicago: The Goodheart-Willcox Company, Inc., Publishers. 1922. Price $7.50.

If the enormously increased frequency of automobiles is taken under consideration, it must be admitted that "Dyke's Automobile and Gasoline Encyclopedia" actually is an article "no household can afford to be without." The text so completely serves everybody having to do with automobiles that it is, indeed, a book of general automobile information. Not only repair men and mechanics will find it satisfactory to use nor need it be limited to those instructing learners in the art of driving and in the greater art of understanding their engines and their cars, but the owner himself will be enabled by a careful study of "Dyke's" to keep his car out of the repair shop except for necessary and periodical overhaulings and repairs. He can, through study, come to understand his car thoroughly. Moreover, he will learn to determine when a repair job is done correctly and, what is of just as great importance, when it is necessary to send the car to the shop.

The information presented in this complete and yet handy volume is immense. Not only does it deal with everything pertaining to gasoline engines and to all the various contrivances, electric and otherwise, that enter into the make-up of a car, but it deals also with data of more general interest and contains suggestions for remodeling cars; also much helpful discussion of utilizing the car for long trips; both business and pleasure, for camping tours, and so on.

A very complete general index aids materially in finding information on any point that may be desired. Altogether, the present edition of "Dyke's" is a worthy successor to the preceding ones. It is fully up to the times.

JACKSON: "BRONCHOSCOPY"

Bronchoscopy and Esophagoscopy. A Manual of Peroral Endoscopy and Laryngeal Surgery. By Chevalier Jackson, M. D., F. A. C. S. Illustrated. Philadelphia: W. B. Saunders Co. 1922. Price $5.50.

This book is based on an abstract of the author's work, "Peroral Endoscopy and Laryngeal Surgery." It interests the general practitioner in so far as he must know when to resort to direct inspection of the bronchial and esophageal interior. Probably there are few general practitioners qualified to undertake the actual operation. Still, at least an acquaintance with the method is indispensable.

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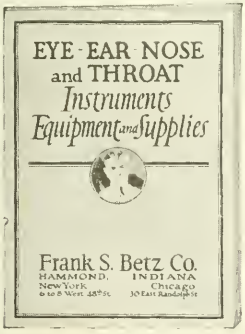

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This is the first Betzco catalog devoted exclusively to eye, ear, nose and throat instruments, supplies and equipment. It is filled to the brim with new and useful information about new instruments and equipment for specialized practice. The edition is limited, and we are only reserving copies for physicians, who are interested in having it for reference.

Special features that will be of particular interest are the new sections containing a representative line of Chevalier Jackson instruments; electrically lighted instruments of the Electro Surgical Instrument Company; new ophthalmic apparatus; furniture and equipment, newly designed. To send for this complete book puts you under no obligation,—*it is yours for the asking.*

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News Notes Department

To secure sleep and sedation without opiates or bromides has been the aim of the physician in recent years and laboratory workers accordingly have sought diligently for the means. The search was started in at least one laboratory years ago, that of John B. Daniels, in Atlanta, Ga. The light was seen early here; the need anticipated and apparently met with a tincture of passiflora incarnata.

Users pronounce it very useful in cases of hysteria or nervousness needing sedation, for the restlessness and tossing about so troubling in fevers generally, and for insomnia. It is said to produce the desired results without depressing the heart; to do its work safely as well as effectively. With these merits it could scarcely have attained less popularity in medical circles than it has; for years this tincture, which bears the trade name of Pasadyne, has been regarded as a proprietary of the highest grade.

Appreciating iodine. How many know that trouble is bound to follow if the iodine store in the thyroid gland falls below 0.1%? Such a deficiency is apt to give rise to goitrous growths. The other signs and symptoms are less gross but no less actual. The living organism must have its portion of iodine. Little is needed, to be sure, but that little is vital. Formerly, people obtained it as an impurity in their table salt, to wit, sodium iodide; at least this is considered an impurity today.

Hence, the doctor finds it frequently necessary to give it as a medicine, in prescribed doses. Burnham's Soluble Iodine is one of the best preparations available for this purpose.

The country doctor of these days, where the roads are good, makes his distant calls in an automobile. Or, if he lives in a section where the roads are not quite so good, he may still get about in a horse-drawn vehicle. But if he practices in the hills, or in remote places not yet traversed by state highways, he may find himself with no alternative in the way of transportation. He is obliged to go horseback on his rounds.

In that case he needs a saddle-bag, one that will wear and weather against all inclemencies, that will stand the roughest usage, and still be as light and compact as possible. Such a bag may be obtained from the S. E. Massengill Company, of Bristol, Tenn., and it has been our custom for years to direct all inquiries to them. For we know that the doctor will get

Iodotone

Iodine for Oral Use

"**Iodotone**" is a standardized glycerole of Hydrogen Iodide, each fluid dram representing one grain of Iodine. It will produce the constitutional effect of Iodine in a short time, with no gastric derangement, and seldom produces iodism.

Indications and Dosage

Indicated whenever Iodine may be used internally, and is used with success in Bronchitis, Eczema, Syphilis, Arterio-Sclerosis, Rheumatism, etc. The dose is one to two teaspoonfuls in water before meals.

Phosphorcin

A Reconstructive Tonic

"**Phosphorcin**" is a reliable preparation of the glycerophosphates combined with nux vomica and lactated pepsin. It may be given for a lengthy period without causing gastric disturbance, as it does not contain sugar or alcohol.

Indications and Dosage

Indicated as a reconstituent in all diseases of the Nervous System, Anemia, Chlorosis, Sexual Impotence and Diabetes. The dose is two teaspoonfuls in water after meals.

Send Your Name and Adddress for Free Trial Supply

EIMER & AMEND, Third Ave., 18th and 19th Stre ets, NEW YORK

Promoting a Favorable State of Mind

On the borderland of illness or convalescence, patients frequently tend towards a morbid state of mind.

The usual habits of active life perhaps have been, or must be suspended. Daily existence seems one negation after another. And most irksome of all is the restricted diet.

In such cases, when even the limited use of coffee or tea is contra-indicated, Instant Postum may be a source of much comfort and satisfaction, and therefore a vital factor in promoting a brighter mental outlook.

Instant Postum is one of the most convenient of beverages for sick-room or hospital use, since it is prepared instantly in the cup by the addition of hot water, and may be purchased from the nearest grocer at moderate cost.

Samples of Instant Postum for individual and clinical examination will be sent on request to any physician who will write for them.

POSTUM HEALTH PRODUCTS COMPANY

Postum Cereal Company, Inc.
Battle Creek, Michigan, U. S. A.

from that source precisely what he wants and at a price no higher than he expects to pay for a good article.

The transplantation idea. It is by no means new. It has only been lost and now has been found, as one may say. The question is, will gland transplantation become a vogue, attain popularity, establishing itself at last as something worthy of permanence. Being a surgical operation, entailing the use of the knife, this may be doubted. It is described as a small operation, not dangerous to life. But it is surgery just the same.

Besides, it is said on good authority that presenile and senile conditions can be combatted quite as effectively by giving a testicular preparation in capsules or tablets, by mouth. Many physicians are now giving Orcho-Lymph Compound (Mayson) and meeting we understand with success. This is from the Mayson Laboratory, 5 South Wabash Ave., Chicago. It is sold in glass vials containing 20 tablets, 5 vials to the package.

An ounce of prevention is worth a pound of cure. How to prevent disease, therefore, is worthy of more concern that has hitherto been elicited among physicians, and all public-spirited people.

Just now sepsis within the oral cavity is being blamed for many long-standing and remote troubles, ailments never before suspected to have connection with the mouth. Even organic heart disease is said to have its origin in pus pockets under the gums. If true, all the more reason for enjoining on one and all alike the habitual use of a good mouthwash, beginning as early in life as possible, even with the eruption of the first permanent teeth in children. Lavoris is one of the reliable preparations of this class, which the doctor can recommend to his families with confidence. It contains a little zinc chloride, just enough to impart a desirable degree of astringency.

A matter of taste. The poet, Oliver Wendell Holmes, once advised us to discard many of our drugs. If thrown overboard, into the ocean, said he in effect, it would be better for humanity but grievously hard on the fishes. We wonder if he had creosote in mind when he said this. It is quite likely that creosote was one of the drugs he thus would consign to oblivion. In his day there was no acceptable preparation of the drug. It was distasteful medicine to take, offending both the palate and the stomach.

But now that we have Killgore's Mistura Creosote Compound, the curse is lifted from this drug, as one may say. And this is well, for creosote is a drug that physicians cannot afford to discard.

It is customary to value cod-liver oil simply as a source of fats and so to give it in medicinal doses to supplement the fatty elements in the daily fare. In this light it becomes merely

A DANGER SIGNAL

There remains no question as to the wisdom of employing suitable means to reduce hypertension and counteract or prevent it.

It is safe to regard high blood pressure always as a danger signal. It is wise always to treat it intelligently and safely by means of

Pulvoids No. 373 Natrium Co.

which is essentially the famous formula of Sir Lauder Brunton,
modified and proven by Dr. M. C. Thrush.

PULVOIDS NO. 373 NATRIUM CO. contain Sodium Nitrite, Potassium Nitrate, Sodium Bicarbonate, Nitroglycerin and Crataegus Oxyacantha. Sugar coated white or green with a special coating to disintegrate in the intestinal tract, thus avoiding gastric disturbance.

A safe, non-toxic, effective combination which is prompt in action and prolonged in effect. A clinical test will demonstrate its superiority and service.
Bottles of 1000 Pulvoids $5.00, direct to Physicians and Hospitals only, mailed free when cash accompanies order. Trade bottles of 100s, per dozen $9.00. Literature, case reports, etc., free on request.

If you dispense, ask for complete price list, including Endocrin Capsules and Salvarols (606 Suppositories).

THE DRUG PRODUCTS COMPANY INC.

PHARMACEUTICAL MANUFACTURERS

153 Meadow Street -:- Long Island City, N. Y.

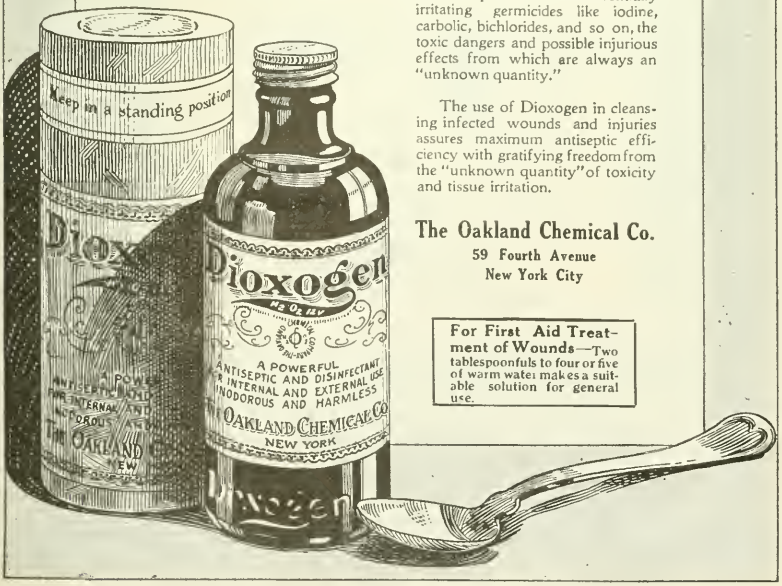
Dioxogen

H_2O_2 12v

Antiseptic Efficiency Without the "Unknown Quantity"

NEVER was the necessity for prompt and effective antisepsis in the care of emergency or infected wounds, so widely and thoroughly recognized as it is today. As a logical consequence, never was there a time when the value of Dioxogen as an all round antiseptic was more evident.

This is easy to understand on the part of the many medical men who stop to realize that the germicidal efficiency and tissue healing properties of Dioxogen are due entirely to the **pure, active oxygen** it is able to carry directly to the wound or place required. Naturally they have come to prefer Dioxogen to those poisonous and essentially irritating germicides like iodine, carbolic, bichlorides, and so on, the toxic dangers and possible injurious effects from which are always an "unknown quantity."


Keep in a standing position
Dioxogen
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A POWERFUL ANTISEPTIC AND DISINFECTANT FOR INTERNAL AND EXTERNAL USE INODOROUS AND HARMLESS
THE OAKLAND CHEMICAL CO
NEW YORK

The use of Dioxogen in cleansing infected wounds and injuries assures maximum antiseptic efficiency with gratifying freedom from the "unknown quantity" of toxicity and tissue irritation.

The Oakland Chemical Co.
59 Fourth Avenue
New York City

For First Aid Treatment of Wounds—Two tablespoonfuls to four or five of warm water makes a suitable solution for general use.

a food, although administered by means of a spoon, plain or in some kind of vehicle, as any medicine might be. But analysis shows that besides fatty principles the oil contains several therapeutic principles, among them vitamines.

This is important and well to know. It relieves the doctor of the necessity of prescribing the oil in its clear unchanged state, and even in emulsion. He may then with all due confidence give a preparation that is agreeable to the taste, in which there is not the slightest suggestion of its fishy origin, such as Hagee's Cordial, for instance, which contains the nonfatty extractives of the oil, including the vitamines above referred to. Samples are offered by the Katharmon Chemical Co., St. Louis.

From the spoon to the syringe is a considerable span. Remember the old days of sulphur and molasses and worse mixtures, given with the spoon to young and old, evil-tasting doses which made medicine-taking nothing less than a punishment? Coated tablets and pills and gelatin capsules came later. They were kind inventions, sparing the palate by masking the evils hitherto abided.

The giving of drugs intravenously not only spares the palate but the stomach as well. There need be no gastric irritation nor disturbance of function under this method. Nor is this all. The greatest advantage from introducing drugs directly into the bloodstream, as anyone may infer, is that it does away with possible interference with drug action by the digestive process and permits of quick, almost instantaneous, benefits.

The catalogue of the Intravenous Products Co., of America, Inc., is full of interesting suggestions. Their ampule solutions are considered most reliable.

Of the laboratories in this country specializing in the production of antigenic agents the Gilliland Laboratories, located in Ambler, Pa., deserve the confidence of prescribers. A full line of biologic products are made here, including antitoxin, smallpox vaccine, tuberculin and a variety of kindred agents, also the materials comprising the Shick Test; culture media, etc. A complete list with prices will be sent on request to those interested.

Specification by the prescriber is nowhere more necessary than in the use of biologic agents. It does not suffice to write merely "diphtheria antitoxin" or again "vaccine virus" and leave to the druggist the option of dispensing what brand he chooses. That certainly is not fair to the patient nor fair to the physician himself. To avoid a poor or indifferent product he ought to specify "Gilliland's" or some product no less reliable.

Iodine. When the prescriber wants the reputed benefits of iodine, he wants it, of course, without disagreeable side symptoms, such as gastritis and acne. Potassium iodide and other ordinary preparations for this reason are not

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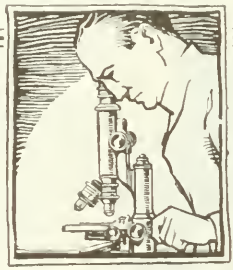

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AUTHORITY

Wherever you are and whatever your pathological facilities, check up occasionally with the NATIONAL. Wassermann Test, Blood Chemistry, Tissue Diagnosis, Bacteriological and Clinical pathological work. Containers with full instructions sent free on request.

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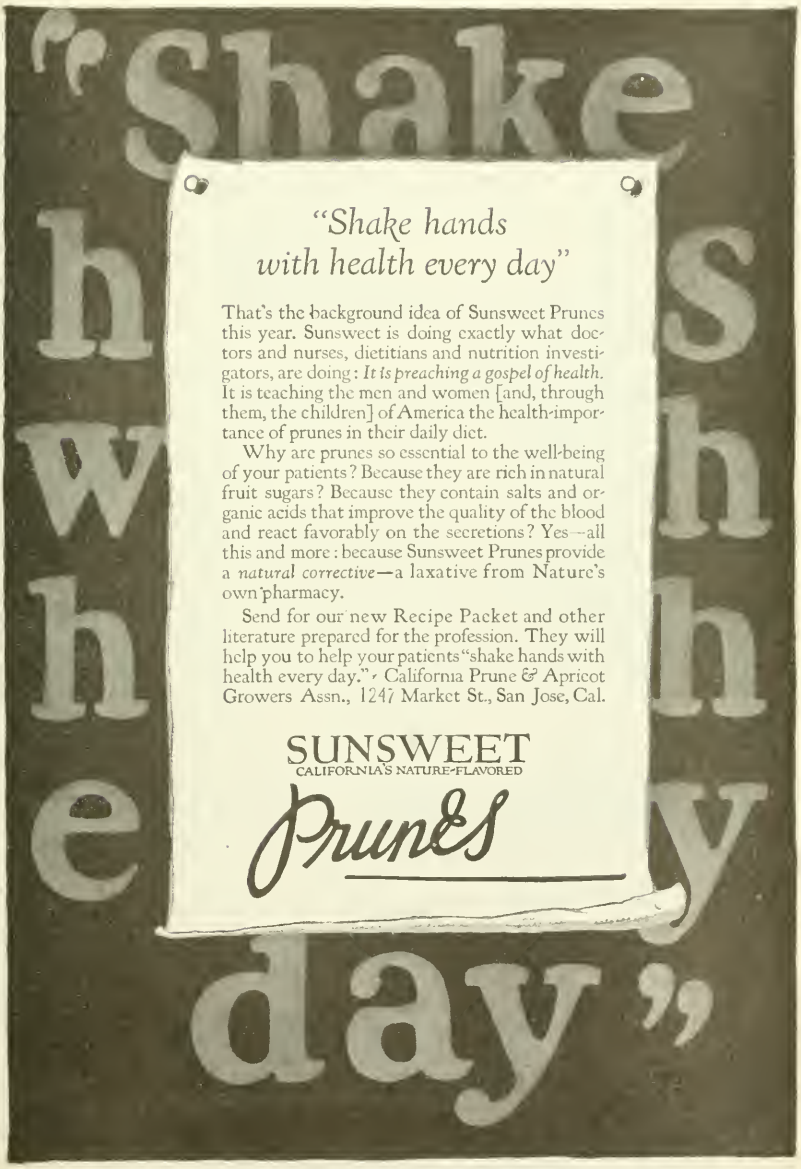
"Shake
h s
w h
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e y
day"
"Shake hands
with health every day"
That's the background idea of Sunsweet Prunes this year. Sunsweet is doing exactly what doctors and nurses, dietitians and nutrition investigators, are doing: *It is preaching a gospel of health.* It is teaching the men and women [and, through them, the children] of America the health-importance of prunes in their daily diet.
Why are prunes so essential to the well-being of your patients? Because they are rich in natural fruit sugars? Because they contain salts and organic acids that improve the quality of the blood and react favorably on the secretions? Yes—all this and more: because Sunsweet Prunes provide a *natural corrective*—a laxative from Nature's own pharmacy.
Send for our new Recipe Packet and other literature prepared for the profession. They will help you to help your patients "shake hands with health every day." California Prune & Apricot Growers Assn., 1247 Market St., San Jose, Cal.
SUNSWEET
CALIFORNIA'S NATURE-FLAVORED
Prunes

likely to be employed by one considerate of his patients. Nor is there any necessity for prescribing either potassium or sodium iodide. There are other means at hand.

For example, one may give Iodotone, a glycerole containing one grain of available iodine in each fluid dram. This comes from Eimer & Amend, New York City. They are sending samples to physicians requesting them.

Iodotone, they claim, is a very satisfactory prescription for all cases calling for iodine, serving effectively for a long range of ailments, including the respiratory.

A general tonic that for years has been a favorite with many physicians, and still continues to be, is Gray's Glycerine Compound. Every druggist knows it or what at least goes ordinarily under this name. But as dispensed it varies somewhat as to taste and physical appearance; and therefore presumably in composition. This fact has been observed much to their disgust by those accustomed to prescribing it. Only by specifying can one be sure of obtaining for his patient a preparation made according to the original formula of Dr. John P. Gray. It is so made by the Purdue Frederick Co., New York City. Their label stands for a uniform and absolutely reliable product.

One thing usually noticeable after a week or so in patients receiving it is an improvement of appetite, followed later by a feeling of well-being. Few if any remedy combinations are as good in anorexia. It is excellent for those convalescing from long illnesses or otherwise debilitated.

The growing use of drugs by the injection route in the last half-dozen years is quite remarkable. Once on a time about the only drug that was commonly administered in this way was morphine and next to that, strychnine. Now a score or more are given hypodermically with scarcely less ado than directing the patient to take a teaspoonful of this or that in water. Once the technic is mastered, the trick of getting the drug into the bloodstream expeditiously, very little if any trouble is experienced.

Ampule solutions now provided by chemists keep well and are easily handled. One should be sure they are as represented or labeled, as he may by using those made for example by the New York Intravenous Laboratory, 100 West 21st Street, New York City. Their list is interesting.

Substitute for coffee. Admitting that this old and highly esteemed beverage is not too hastily to be denied to a patient, there are no doubt instances where the doctor is justified in advising strongly against its continuance in the dietary.

At such times he can do no better by his patient than to propose the use of Postum Cereal in its stead. As a substitute many find it very satisfying and to have it, rescues them from a

The Management of an Infant's Diet

Mellin's Food contains 58.88 per cent of Maltose
Mellin's Food contains 20.69 per cent of Dextrins

a proportion of

Maltose and Dextrins

best suited to the carbohydrate needs of the average baby.

Mellin's Food contains 10.35 per cent of Cereal Protein.

Mellin's Food contains 4.30 per cent of Salts which consist mainly of Potassium Salts, Phosphatic Salts, and a small amount of Iron.

These facts should be considered in selecting a modifier of milk for infant feeding and these facts point out some of the reasons for the success of Mellin's Food which probably is unparalleled in any decade since the beginning of the study of scientific infant feeding.

Mellin's Food Company, Boston, Mass.

KELLOGG'S BRAN
is efficacious because
it is ALL BRAN !

Kellogg's Bran is constantly increasing in favor among physicians because it can be prescribed with confidence both in mild and chronic constipation cases.

Where constipation conditions prevail, as you know, half-way measures cannot be recommended. Bran must be ALL BRAN to secure results. Foods with a small bran content only delay relief and restoration of normal conditions.

Kellogg's Bran has won merit, not only for its really delightful nut-like flavor and palatability, but because it is ALL BRAN! Its natural bulk gives the required mechanical action that affords the required relief.

Patients enjoy Kellogg's Bran because it is cooked and krumbled. It is served as a cereal, sprinkled over other hot or cold cereals or used with great success in baking and cooking. Two tablespoonfuls daily for mild conditions; as much with each meal in chronic cases. All grocers sell Kellogg's Bran.

Physicians are requested to mail the Kellogg Toasted Corn Flake Co., Battle Creek, Mich., a request card for a full-sized sample package of Kellogg's Bran. It will be sent immediately without obligation.

An Analysis of
Kellogg's BRAN
cooked and krumbled

Aside from its regulatory value, Kellogg's Bran commands attention as one of the most valuable foods known. Read this analysis:

Moisture	2.50
MINERAL SALTS	**8.41**
Protein	15.8
Fat	2.8
Crude Fiber	8.9
Carbo-hydrates	61.6
Calories (per pound)	1480.46

Kellogg's

Look for this signature W. K. Kellogg

the original BRAN - *cooked and krumbled*

rebellious state of mind. Others agree, though perhaps reluctantly, that Postum Cereal does give them a certain degree of compensation for the loss of their morning coffee. Often one learns to like it and to prefer it even after health conditions have been restored.

From now till spring the physicians of the country will resort frequently to that remarkable compound of iodine and lime some years ago introduced by The Abbott Laboratories, Chicago, under the name of Calcidin.

While serving generally as a good substitute for the older iodine preparations, including the tincture and the iodides, Calcidin is particularly useful against respiratory disorders. In this field it stands pre-eminent, as a curative and abortive agent. It is the mainstay with thousands of doctors in epidemic colds, bronchitis, croup and kindred ailments. Old users would scarcely care to practice without it. Strangers to it should immediately make its acquaintance.

The nasal syphon announced in this issue of our journal by H. B. Nichols, 145 East 35th Street, New York City, will interest many readers, we feel quite sure. The principle of irrigating the nasal passages, while utilizing a negative pressure or suction force, is a departure from appliances which operate simply and solely by direct pressure. The desirability of suction, as a force tending to secure cleanliness of these passages, is scarcely to be questioned. With a certain degree of suction one is better able to remove tenacious secretion, and inspissated mucus and adherent crusts; by the same token the deeper recesses are reached and evacuated and the mucosæ the more thoroughly cleansed.

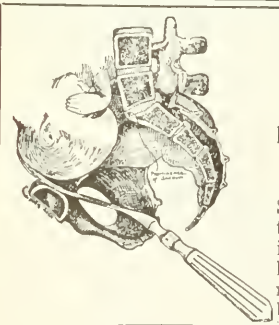
Those interested should write for a reprint (from The Medical Times) entitled "Cleansing The Nose."

Men like gods. One of the latest fiction books bears this title. It recalls for us the ideas of manliness so esteemed by the ancient Greeks, by whom perfection of the physical body was diligently sought and idealized.

Manliness and strength, both physical and mental, are linked to something like a normal functioning condition of the sex glands. A weakening sexuality means decadence, senility. Impotence, above all in men this side of sixty, is a deplorable lot, and oddly enough it is the lot of a great many men in this day and age.

There is thus need for such a preparation as Aphrodene, which is being offered to the medical profession by the Astor Chemical Corporation, 13-25 Astor Place, New York City. It is said to have extraordinary merit as a remedy for impotence cases.

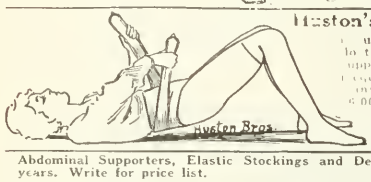
What food lacks, that is food as available to the average person, may be provided and is being provided by a class of preparations calculated to supplement the meal. For this enterprise credit must be given to those who



Very Helpful in Child Birth

Huston's Obstetrical Blade or "Shoe Horn" is really a unique invention

Where the foetal head engages against the Symphysis pubes instead of emerging directly toward the birth canal, this instrument is worth its weight in gold. The head of the foetus may be readily deflected toward the canal. Eliminates hours of suffering. Price $5. Money back guarantee.



Huston's Comfort-U-Supporter (WASHABLE)

... unsurpassed in cases of enteroptosis, gasteroptosis, ...ting kidney and post-operative conditions, requiring ...upport. It relieves dragging on the solar plexus and ...quently restores to vigorous health; also helpful in ... cases of confinement. Retail prices: 6" width, ...00; 7" width, $6.50; 8" width, $7.00; larger sizes pro... portionately higher in price. A discount of 25% is allowed physicians. Washable. Durable. Economical.

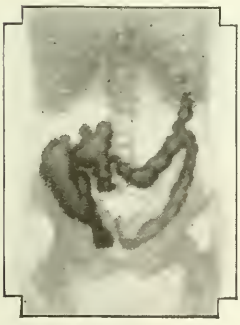
Abdominal Supporters, Elastic Stockings and Deformity Appliances our leading specialties for 38 years. Write for price list.

HUSTON BROS. CO., 30 EAST RANDOLPH STREET, CHICAGO, ILL.

Complete Lines of Physicians' Supplies

Lubrication and diet in intestinal stasis

A Normal Colon



General Displacement of the Colon into the Pelvis in Intestinal Stasis

A recognized authority says that the administration of liquid petrolatum adds to the effectiveness of the routine treatment of intestinal stasis (such as diet, etc.) by lubricating the bowel, softening the fecal mass, and easing its passage to the rectum and final expulsion.

NUJOL is the most effective liquid petrolatum for use in the treatment of intestinal stasis. Its capacity for penetration and lubrication of the feces is unsurpassed.

In determining a viscosity best adapted to general requirements, the makers of Nujol tried consistencies ranging from a water-like fluid to a jelly. The viscosity of Nujol was fixed upon after exhaustive clinical test and research and is in accord with highest medical opinion.

Sample and authoritative literature dealing with the general and special uses of Nujol will be sent gratis. See coupon below.

Nujol

REG. U.S. PAT. OFF.

A Lubricant, not a Laxative

Nujol Laboratories, Standard Oil Co. (New Jersey)
Room 768, 44 Beaver Street, New York

Please send booklets marked:

☐ "In General Practice"
☐ "A Surgical Assistant"
☐ "In Women and Children"
☐ Also sample

Name .....

Address .....

first described the deficiency diseases, as for example, beriberi, one of the most notable disorders following a deficiency of the vitamine present in whole rice but missing in the polished rice in vogue today.

In the same way, the lack of other vitamines gives rise to other disorders more or less serious or to symptoms abnormal to the healthy person. And hence the logicalness of supplementing the diet with such a preparation as Nutramine (Norwich Pharmacal Co.) which supplies all three of the recognized vitamines, designated by the three first letters of the alphabet.

Unusual attention is being given by the medical profession these days to the problem of developing an organotherapy for diabetes. Contrary to an impression gained from reading some of the articles appearing in the medical journals, this is not a new subject. As far back as 1913 Harrower dealt with it in one of the English journals.

An interesting development of very considerable promise was recently announced by Dr. Henry R. Harrower, who states that he has perfected in his laboratory in Glendale, California, a pluriglandular formula directed at the pancreatic deficiency, which is known to be so important in connection with this disease.

Pan-Secretin Co. (Harrower) is a combination of the extract of the pancreas (rich in the incretory cells) and secretin, the well known pancreatic hormone stimulant, along with tonsillar extract. This new product is worth investigating, for it is rendering efficient service in many serious cases of diabetes.

In considering a new remedy, physicians nowadays very pertinently inquire as to the clinical data collected before the product is offered to the profession at large.

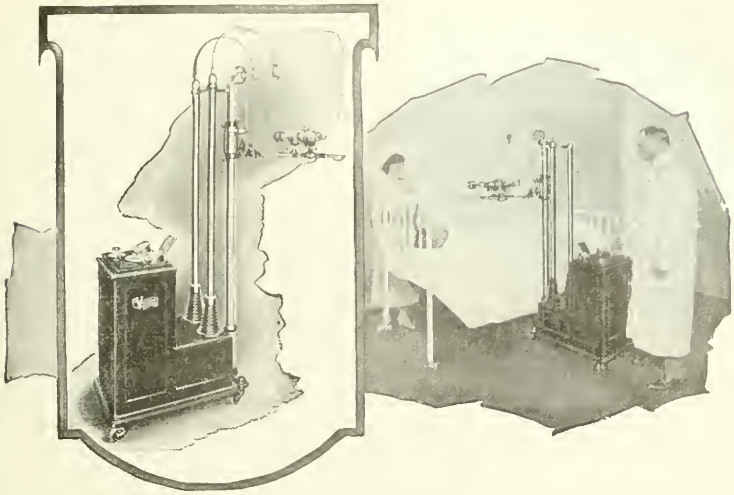
We understand that proposed additions to the specialty list of Parke, Davis & Co. are put through a rigid preliminary clinical test, and that it was only after a trial lasting eighteen months, during which time upwards of ten thousand doses were administered to no less than four hundred patients, that Mercurosal, the new synthetic mercurial compound, was made available by Parke, Davis & Company to the profession in general.

The distinction claimed for this preparation is that it enables the physician to inject large doses of mercury either intravenously or intramuscularly without unpleasant sequelae; it may be given intravenously without incidental injury to the vessel walls.

The reader is referred to the announcement of the manufacturers in our advertising pages.

Since many mothers refuse absolutely to nurse their babies, for which one excuse or another is given, there is more work for the doctor to do. For him, from the pecuniary standpoint, this ill wind that brings trouble to many a household is most beneficent. From the professional angle, however, his task is far

PREPARE NOW
against the advent of bronchial and pulmonary irritation and inflammation.
PROTECT PATIENTS
by raising the power of resistance, and increasing the nutrition and functional activity of body cells.
Prescribe Hydroleine
the permanent, pleasant, practical emulsion of Cod Liver Oil devised by G. Overend Drewry, M.D., M.R.C.S., and H. C. Bartlett, Ph.D., F.C.S., London, and marketed by the well-known Charles N. Crittenton Co.; also demonstrated by thousands of physicians to be a most valuable energy producer, blood maker, tissue builder and nerve invigorator, as well as for its action upon the respiratory tract.
Contains 45 Per Cent of Pure Cod Liver Oil.
Sample and Literature on request
Century National Chemical Co.
86 Warren Street New York City



What This Simplified X-Ray Apparatus Means

A Good Diagnostic Radiograph for Every Exposure

This is now possible to the user of the Victor Stabilized Mobile X-Ray Unit—no longer need he await years of experience to arrive at this point of efficiency.

Guesswork Practically Eliminated

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from easy and perhaps he often wished himself relieved of it. A good substitute for mother's milk is not so readily concocted; formula after formula has failed, the infant persistently losing weight and frequently succumbing to intestinal disease.

Among our best and surest resources in such crises is Nestles Milk Food, a cow's milk of certified purity, reduced to a powder form, requiring only an addition of water, in varying proportions, to prepare it for use. It is sold in 12-ounce packages.

Vaginal suppositories. Many women are legitimate subjects for the knife who refuse to consider undergoing an operation, even the slightest. With them, the physician must do the best he can by the local and internal use of such remedies as promise to relieve the distress present.

The vaginal suppository in the contingency will help him out more effectively than he may think. There are a number to choose from, the leading chemists listing one or more. Among the favorites is that made by Micajah & Company, of Warren, Pa. This is known as Micajah's Medicated Wafer. It has been in use for years. Druggists report a large and steady demand for it. Apparently it is too good to discard.

The bromides. Those who are prescribing the bromides, and with the ordinary drugs of commerce find that they disagree with certain patients, thus offsetting the desirable sedative effects, will be glad to have Merrell's Pentabromides brought to their attention. Many of our readers are no doubt using this preparation, while others may not know that such an excellent preparation is available.

It carries the five well-known bromides in a palatable medium. Gastritis seldom if ever develops from its use, even when continued for some time. All in all, from reports current, it appears to be as we have said, a most excellent prescription for patients needing sedation.

Among the new books is one by Dr. T. Wilson Deachman, formerly demonstrator of chemistry, Hahnemann Medical College, Chicago, on the treatment of disease by the Auto-Biochemic method.

Briefly, this consists in giving at timed intervals, injections of autogenous vaccines prepared from the patient's own urine. The urine is distilled and the residue collected and diluted with normal salt solution, to the 6x homeopathic potency for diagnostic purposes and the 30x potency (usually) for curative treatment. Quite remarkable results are said to follow in many cases.

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Bacillus acidophilis. What is this? The question is natural enough. It is quite possible that some of our readers have never heard of it.

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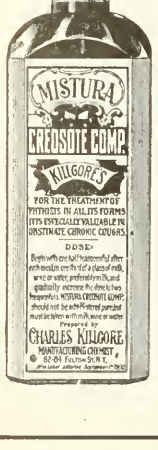

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Prunes as food. The widespread interest now evinced in the vitamines, as well as the increasing interest in foods as sources of necessary mineral salts, will no doubt bear good results. It will probably lead to a more careful selection of the items comprising the three daily meals. At least the physician, it is hoped, will consider the matter more seriously than he has in the past. For he is more than a prescriber of drugs. It should interest him to know that his patient is eating properly.

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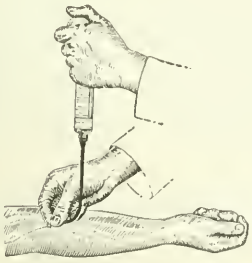

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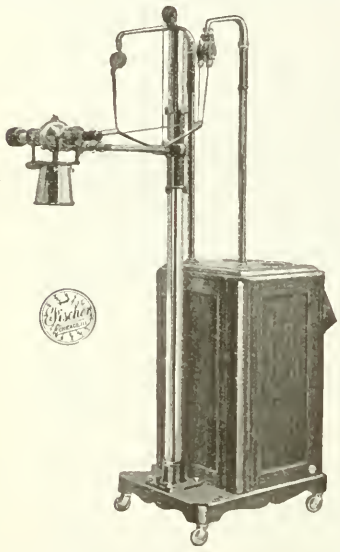

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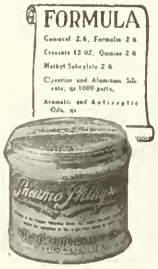

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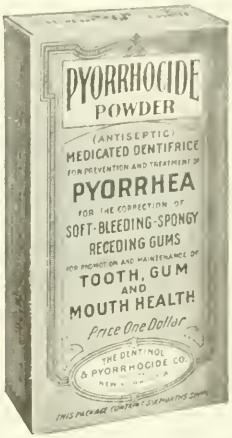

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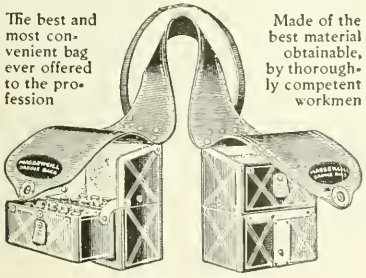

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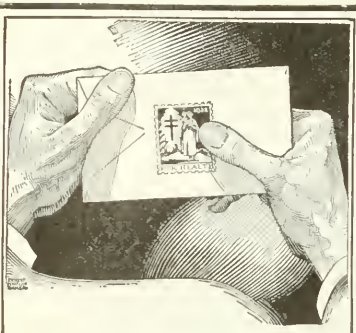

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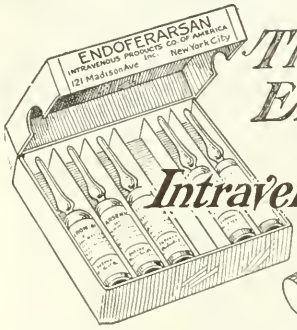

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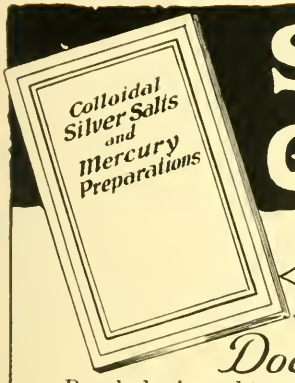

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